



STAFFORDSHIRE COUNTY COUNCIL

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*Annual Report*

*of the*

MEDICAL OFFICER OF HEALTH

W. D. CARRUTHERS, M.B., D.P.H.

*For the year 1939*

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STAFFORD :

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# INDEX

Page	Page
Ante-Natal Clinics ... ... 27	Inflamed and Discharging Eyes 21
Ante-Natal Scheme in Rural Districts ... ... 27	Isolation Hospital Accommodation ... ... ... 53
Area and Population ... 7	Local Government Act, 1929 11
Artificial Light Treatment 30	Maternal Mortality ... ... 23
Bacteriological Laboratory ... 34	Maternity and Nursing Homes 22, 28
Births ... ... ... 9	Maternity Outfits ... ... 28
Births, Notification of ... 33	Mental Defectives : Institutional Provision for the Care of ... ... ... 11
Cancer ... ... ... 60	Midwives Act, 1936—
Chemical Laboratory ... 40	Scheme ... ... 12
Clinics and Treatment Centres 25	Compensation ... ... 15
Consulting Obstetricians ... 28	Midwives, Provision and Inspection of ... ... 16
Contributions to District Councils ... ... 51	Payment of Fees ... 17, 28
Deaths ... ... ... 9	Post Certificate Courses 15
Dental Laboratory ... ... 34	Recovery of Fees for Medical Attendance ... 20
Dental Treatment ... ... 31	Milk in Schools Scheme ... 47
Extra-Nourishment Scheme 32	Milk Supply ... ... ... 41, 44
Health Services, General Provision of ... ... 11	Milk, Special Designations ... 48
Health Visiting Scheme ... 26	Ministry of Health Inquiries 51
Health Visitors ... ... 33	Mothercraft, Lectures on ... 34
Hospitals ... ... 11, 25, 53	Nursing Homes Registration 22
Housing Acts ... ... 52	Nursing in the Home—
Infant Life Protection ... 33	General Nursing and Infectious Diseases ... 12
Infantile Mortality ... ... 23	Ophthalmia Neonatorum ... 28
Infant Welfare Centres ... 26	Ophthalmic Treatment ... 29
Infectious Diseases—Prevalence of and Control over 53, 70	Orthopædic Hospital and Clinics ... ... ... 25, 29
	Poor Law Medical Out-Relief ... .. ... 11

## INDEX—continued.

Page.	Page
Puerperal Pyrexia Regula- tions ... ... ... 21, 28	Tuberculosis ... ... ... 56
Rivers Pollution Prevention 50	Vaccination ... ... ... 56
Sewerage and Sewage Disposal 50	Venereal Diseases ... ... ... 40, 60
Statistics, Vital ... ... ... 7, 64	Vital Statistics ... ... ... 7, 64
Stillbirths ... ... ... 21	Water Supplies ... ... ... 49

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## ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH.

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### PRELIMINARY NOTE.

The Annual Report for 1939 has been modified in accordance with the recommendations of the Ministry on account of the War. To ensure continuity, the statistics are, with a few unimportant exceptions, presented as in previous Reports. All essential information has been retained, though comments have been reduced.

The vital statistics show that the birth-rate continues to be higher, and the death-rate lower, than in England and Wales as a whole. The maternal mortality is slightly higher than in 1938, and a little higher than that for England and Wales. The infant mortality is also slightly higher than the average for England and Wales. No serious outbreak of infectious disease occurred, and again this year there are reductions in the percentages of deaths in persons of both sexes before the age of 45, which have steadily fallen since 1920.

In 1939 the number of local Nursing Associations undertaking general nursing, affiliated to the County Organisation, was increased by one to 98, and 9 independent Nursing Associations continue. The arrangements made by these voluntary bodies for general nursing practically cover the whole County.

The Report shows that the numbers attending the special Ante-natal Clinics increased considerably, but those who took advantage of the Rural Ante-natal Scheme were fewer.

The number of specimens received at the County Bacteriological Laboratory was slightly less this year. On reference to the Report it will be seen how extensively the facilities offered are utilised by Local Authorities, General Practitioners and Hospitals. For some years the Laboratory has taken an active part in measures to safeguard public health, and the increases in all types of work undertaken, which are detailed in the Report, indicate how greatly this is appreciated.

Similarly, the report on the work of the Chemical Laboratory shows how valuable this has been to Local Authorities in connection with their water and sewage schemes, and how essential this Laboratory is in safeguarding the purity of the food supplies.

Again this year, I should like to draw attention to the large amount of work undertaken by Local Authorities to improve their water supplies, and the arrangements for sewage disposal. The Report shows to what extent the County Council has financially assisted these bodies in such matters. With the outbreak of war, much desirable work must be postponed.

From a public health point of view, the year 1939 has been a satisfactory one. Wartime has interfered in some measure with the service, but every effort has been made to maintain the various schemes working fully. Air Raid Precautions work demanded a large proportion of the time and energy of the staff, and further difficulties must be expected as the war proceeds.

The safeguarding of the health of the community is doubly important in wartime, and steps should be taken to maintain all the essential public health services.



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## SUMMARY OF STATISTICS.

### 1.—GENERAL STATISTICS.

Area of Administrative County	..	..	..	(acres) 685,503
Population of Area } for Death Rate	..	..	..	763,400
(estimated mid. 1939) } for Birth Rate	..	..	..	761,700
Rateable Value at 1st April, 1939				
(General County Purposes)	..	..	..	£3,165,703
Estimated net product of a penny rate 1939-40				
(General County Purposes)	..	..	..	£12,232 7s. 1d.

### 2.—EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

		Total	M.	F.	
Live Births for	Legitimate	12,935	6,610	6,325	
Birth Rates	Illegitimate	355	182	173	
		13,290	6,792	6,498	Birth-rate 17.4
Do. for	Legitimate	12,967	6,622	6,345	
Death Rates	Illegitimate	357	183	174	
		13,324	6,805	6,519	
Stillbirths	..	550	289	261	Rate per 1,000 total births 39.7
Deaths	..	8,536	4,498	4,038	Death-rate 11.2

#### Deaths from Puerperal Causes :—

	Deaths	Rate per 1,000 total births
Puerperal sepsis	.. 13	0.9
Other puerperal causes	.. 28	2.0
	—	—
Total	.. 41	3.0
	—	—

#### Death Rate of Infants under one year of age :—

All infants per 1,000 live births	..	..	..	..	58
Legitimate infants per 1,000 legitimate live births	..	..	..	..	57
Illegitimate infants per 1,000 illegitimate live births	..	..	..	..	90
Deaths from Cancer (all ages)	..	..	..	..	1,046
Deaths from Measles (all ages)	..	..	..	..	28
Deaths from Whooping Cough (all ages)	..	..	..	..	26
Deaths from Diarrhoea (under two years of age)	..	..	..	..	57

## AREA AND POPULATION.

Since 1934 there has been no alteration in the area of the Administrative County.

The population figures of the various districts used in calculating the birth and death rates have again been supplied by the Registrar-General. In view of alterations in the allocation of births and deaths, which are briefly described below, separate computed populations appropriate for the calculation of birth and death rates have been furnished.

Non-civilian deaths registered after 3rd September, 1939, have been excluded, i.e., the deaths of all males serving in H.M. Armed Forces. These do not include women serving in auxiliary corps, nor any members of A.R.P., auxiliary fire brigade or other similar auxiliary or civil defence services.

Up to the 30th September, 1939, the pre-war practice of transferring deaths to areas of usual residence was maintained. From and after 1st October, however, in the case of a person temporarily residing away from home on account of the war, the death is assigned to the area of temporary residence.

As regards births, up to the 30th September the pre-war practice of transference to the area of the mother's usual residence was also maintained. From the 1st October the primary assignment for the purpose of calculating birth rates is likewise in accordance with the pre-war practice, but for the purpose of calculating infant and maternal mortality a secondary assignment is now made corresponding to that adopted for deaths, viz., to the area in which the mother is temporarily residing as a result of the war.

The Registrar-General has again supplied Areal Comparability Factors for adjusting local death rates. The rate obtained when the crude death rate is multiplied by this factor is then comparable, from a mortality point of view, with the crude death rate of the Country as a whole or with the mortality of any other local area, the crude death rate of which has been similarly modified with its own factor for the purpose.

The rate for each district, adjusted by applying the Areal Comparability Factor, is shown in the table at the end of the Report.

In the following table the census population of the Administrative County for 1931, and the estimated populations to the

The corresponding rates for 1938 were as follows:—Administrative County 11.2, Urban Districts 11.3, Rural Districts 10.8, England and Wales 11.6.

In the following table I have shown the *chief* causes of death for the last ten years, the numbers given for 1939 being 67.1 per cent. of the total deaths:—

TABLE SHOWING CHIEF CAUSES OF DEATH.

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
*Zymotic Diseases ...	301	281	311	231	223	303	217	241	194	193
Influenza ... ...	131	311	221	424	139	170	121	359	142	166
Tuberculosis of Respiratory System ...	476	497	412	469	438	434	358	412	372	368
Tuberculosis, other forms ... ...	104	112	113	87	93	86	74	90	93	75
Cancer, Malignant Disease ... ...	912	897	915	896	963	981	968	989	1033	1046
Cerebral Haemorrhage	431	477	510	460	443	457	477	505	472	492
Heart Disease ... ...	1366	1500	1561	1579	1556	1618	1846	2006	2003	2246
Bronchitis ... ...	352	485	369	409	311	377	366	329	262	273
Pneumonia ... ...	588	630	570	607	570	562	540	603	633	403
Congenital Debility, etc. ... ...	409	459	443	413	412	415	472	482	428	466

\* Typhoid and Paratyphoid Fevers, Measles, Small-pox, Scarlet Fever, Whooping Cough, Diphtheria and Diarrhoea.

MORTALITY AT DIFFERENT AGES FROM VARIOUS CAUSES.

The following table gives the mortality from various causes in different age groups in the Administrative County during 1939:—

CAUSES OF DEATH	AGE AT DEATH										TOTAL
	Under 1	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 55	55 and under 65	65 and under 75	
1. Typhoid and Paratyphoid Fevers ...	—	—	—	—	—	—	—	—	1	—	1
2. Measles ... ...	6	8	5	9	—	—	—	—	—	—	28
3. Scarlet Fever ...	—	1	1	3	—	—	—	—	—	—	5
4. Whooping Cough ...	15	8	2	1	—	—	—	—	—	—	26
5. Diphtheria ... ...	—	3	11	37	1	2	—	1	—	—	55
6. Influenza ... ...	7	4	3	2	3	6	10	30	23	41	37
7. Encephalitis Lethargica ...	—	—	—	—	1	2	2	2	—	—	8
8. Cerebro-spinal Fever	1	1	—	1	2	—	—	—	1	—	6
9. Tuberculosis of Respiratory System ...	1	1	—	7	95	71	70	55	52	15	1
10. Other Tuberculous Diseases ... ...	8	8	11	10	8	11	8	4	5	2	—
11. Syphilis ... ...	1	—	—	—	—	2	2	3	2	1	12
12. General Paralysis of the Insane, Tabes Dorsalis ... ...	—	—	—	—	—	—	—	—	—	—	12
13. Cancer ... ...	—	1	2	3	5	12	55	131	294	351	192
14. Diabetes ... ...	—	—	—	1	4	4	1	12	21	39	28
15. Cerebral Haemorrhage, etc. ...	—	—	—	—	1	—	8	34	107	182	492
16. Heart Disease ...	1	1	1	14	29	58	75	153	393	706	815
17. Aneurysm ... ...	—	—	—	—	—	3	—	3	5	3	15
18. Other Circulatory Diseases ... ...	—	—	—	—	—	1	—	20	55	153	176
19. Bronchitis ... ...	34	1	3	2	3	4	4	28	35	57	102
20. Pneumonia (all forms)	103	31	15	4	16	18	23	31	45	72	45
21. Other Respiratory Diseases ... ...	—	2	4	1	1	4	—	5	10	13	86
22. Peptic Ulcer ...	—	—	—	—	—	6	8	17	24	17	3
23. Diarrhoea, etc. ...	55	2	1	2	—	2	2	2	4	5	78
24. Appendicitis ...	—	—	2	9	8	3	4	4	4	3	40
25. Cirrhosis of Liver ...	—	—	—	—	—	—	2	2	5	3	13
26. Other Diseases of Liver ... ...	—	—	—	—	—	—	1	5	15	9	37
27. Other Digestive Diseases ... ...	14	3	4	5	3	7	9	22	30	36	19
27. Acute and Chronic Nephritis ...	—	—	—	4	12	13	21	35	47	61	33
29. Puerperal Sepsis ...	—	—	—	—	2	7	3	1	—	—	13
30. Other Puerperal Causes ... ...	—	—	—	—	5	15	8	—	—	—	28
31. Congenital Debility, Premature Birth, Malformations, etc.	454	2	3	2	3	2	—	—	—	—	466
32. Senility ... ...	—	—	—	—	—	—	—	—	1	49	394
33. Suicide ... ...	—	—	—	—	5	4	10	12	17	8	58
34. Other Violence ...	14	12	7	32	50	46	29	43	49	55	64
35. Other Defined Diseases ... ...	—	54	10	16	28	37	52	48	60	114	136
36. Causes ill-defined or unknown ... ...	—	—	—	—	—	—	—	—	1	1	2
Totals ...	770	101	88	177	297	351	412	726	1364	2023	2227
	Special causes included in No. 35 above.										8536
Polio-myelitis ...	—	—	—	1	—	—	—	—	—	—	1
Polio-encephalitis ...	—	—	—	1	—	—	—	—	—	—	1

middle of 1939, are set forth:—

	Census, 1931	Estimated Populations at middle of 1939	
		For Death Rates	For Birth Rates
Urban . . . .	490,632	* 577,200	* 576,700
Rural . . . .	212,622	* 186,200	* 185,000
Totals . . . .	†703,254	763,400	761,700

\* The increase in the population of the Urban Districts, and the decrease in that of the Rural Districts, is due to the changes in Sanitary Districts and boundaries which took place on the 1st April, 1934, under the Staffordshire Review Order, 1934.

† The census population of the Administrative County as constituted at the 31st December, 1939, is less than this figure by 2,902. The estimated population in the portion of the County area transferred to the County Borough of Wolverhampton on the 1st April, 1933, was 5,419, but this decrease was partly neutralized by the fact that on the 1st April, 1932, a portion of the County of Warwick, with an estimated population of 2,517, was added to the Administrative County.

#### BIRTHS.

The live births registered in the Administrative County for birth rate purposes numbered 13,290, compared with 13,252 the previous year, the number in the Urban Districts being 10,344 and in the Rural Districts 2,946.

*Stillbirths.* There were 550 stillbirths registered during the year, of which 413 were in Urban and 137 in Rural Districts. The stillbirth rate per thousand of the population for the combined Urban and Rural Districts is 0.72. During the same period the rate for England and Wales, and for the large towns in England was 0.59.

DISTRICTS	LIVE BIRTH-RATE PER 1,000 OF POPULATION											
	5 yrs 1889- 1893	5 yrs 1894- 1898	5 yrs 1899- 1903	5 yrs 1904- 1908	5 yrs 1909- 1913	5 yrs 1914- 1918	5 yrs 1919- 1923	5 yrs 1924- 1928	5 yrs 1929- 1933	5 yrs 1934- 1938	1939	
	Combined Urban and Rural	33.6	33.2	32.5	30.3	27.8	24.0	24.1	20.2	17.6	17.1	17.4
Staffordshire	Urban . . . .	35.5	34.7	33.6	31.5	29.2	25.0	25.0	20.7	18.1	17.5	17.9
	Rural . . . .	30.2	30.5	30.2	27.0	24.4	21.6	22.0	19.0	16.6	15.7	15.9
England and Wales	... . . .	30.8	29.7	28.7	26.9	24.5	20.4	21.3	17.8	15.6	14.9	15.0
Large Towns in England	... . . .	31.5	30.7	29.7	27.8	25.2	*20.9	22.0	18.2	15.8	14.9	14.8

\* 4 years.

The corresponding rates for 1938 were as follows: Administrative County 17.7, Urban Districts 18.1, Rural Districts 16.2, England and Wales 15.1.

#### DEATHS.

The number of deaths in the Administrative County amounted to 8,536, the number in the Urban Districts being 6,412 and in the Rural Districts 2,124.

DISTRICTS	DEATH-RATE PER 1,000 OF POPULATION											
	5 yrs 1889- 1893	5 yrs 1894- 1898	5 yrs 1899- 1903	5 yrs 1904- 1908	5 yrs 1909- 1913	5 yrs 1914- 1918	5 yrs 1919- 1923	5 yrs 1924- 1928	5 yrs 1929- 1933	5 yrs 1934- 1938	1939	
	Combined Urban and Rural	18.1	16.9	16.1	14.6	14.1	15.0	12.3	11.4	11.6	11.3	11.2
Staffordshire	Urban . . . .	18.9	17.5	16.6	15.1	14.7	15.5	12.6	11.5	11.8	11.3	11.1
	Rural . . . .	16.8	15.7	15.1	13.4	12.7	13.8	11.6	11.2	11.2	11.2	11.4
England and Wales	... . . .	19.1	17.4	16.9	15.3	13.9	15.2	12.5	12.0	12.3	11.9	12.1
Large Towns	... . . .	21.0	19.0	18.2	15.8	14.3	15.5	12.8	12.0	12.3	12.0	12.0
Smaller Towns	... . . .	17.6	15.9	15.7	14.9	13.6	14.1	11.5	11.0	11.2	11.4	11.2

The following table has been prepared covering the last 20 years, in which the percentage of deaths under 45 years of age is worked out in relation to the total deaths at all ages, and in the table the sexes are divided. Speaking generally, 26 per cent. of all deaths now under occur the age of 45.

DEATHS UNDER 45 YEARS OF AGE—MALE AND FEMALE—SHEWING PERCENTAGE OF TOTAL DEATHS (ALL AGES).

YEAR	MALE			FEMALE		
	Deaths all ages	Deaths under 45	Per cent. of Total	Deaths all ages	Deaths under 45	Per cent. of Total
1920	4626	2295	49.61	4084	1935	47.38
1921	4545	2120	46.64	3985	1759	44.14
1922	4534	1943	42.58	4191	1793	42.78
1923	4197	1816	43.27	3788	1556	41.08
1924	4332	1795	41.43	3906	1520	38.91
1925	4556	1919	42.12	4161	1724	41.43
1926	4148	1658	39.97	3808	1441	37.84
1927	4458	1766	39.61	4082	1564	38.31
1928	3965	1449	36.54	3563	1180	33.12
1929	4813	1827	37.96	4293	1453	33.84
1930	4100	1473	35.92	3672	1211	32.98
1931	4376	1472	33.64	3933	1272	32.34
1932	4190	1425	34.01	3824	1174	30.70
1933	4213	1415	33.59	3900	1207	30.95
1934	4105	1261	30.72	3655	1054	28.84
1935	4284	1354	31.61	3802	1159	30.48
1936	4203	1266	30.12	4022	1100	27.35
1937	4793	1484	30.96	4075	1041	25.55
1938	4497	1296	28.82	3915	1065	27.20
1939	4498	1223	27.19	4038	973	24.10

GENERAL PROVISION OF HEALTH SERVICES IN THE AREA.

*Local Government Act, 1929.*

As regards the establishment of hospitals in the north and south of the County, there has been no further development this year, and the remarks in my last Report still apply.

*Poor Law Medical Out-Relief.*

There has been no alteration in this Scheme.

*Institutional Provision for the Care of Mental Defectives.*

There was no alteration in the accommodation for mental defectives during the year. On the 1st January, 1940, there were 462 certified cases chargeable to the County in Institutions and on licence from Institutions, 402 of whom were in Great Barr Park Colony, or on licence therefrom.

## NURSING IN THE HOME.

### (a) *General Nursing.*

At the 1st January, 1940, there were 98 Nursing Associations affiliated to the County Nursing Association undertaking general nursing in the Administrative County, compared with 97 at the end of the previous year, a new Association having been established to serve the Tividale area of Rowley Regis.

Of the 98 Associations, 92 now undertake midwifery, an increase of three, the Aldridge, Heath Hayes and Sedgley Associations having combined this work with their general nursing. One of the 92 Associations only is not concerned with the midwifery service inaugurated by the County Council as a result of the Midwives Act, 1936, viz., Tipton, which operates in the area of another Local Supervising Authority.

In addition to the Administrative County, the County Nursing Association have five affiliated Associations functioning in the City of Stoke-on-Trent and County Borough of Wolverhampton.

There are still nine independent Nursing Associations undertaking general nursing, and three, viz., Essington, Stafford and Tutbury, also include midwifery, the two first named forming part of the County Council Scheme.

### (b) *Infectious Diseases.*

During 1939 no application was received for the nursing facilities available in the County Health Visiting Area in the event of an epidemic of measles or diarrhoea.

## MIDWIVES ACT, 1936.

The scheme under the above-mentioned Act, which came into operation in 1937 and is administered on behalf of the County Council by the local Nursing Associations, the majority of which are affiliated to the County Association, continued quite smoothly during 1939.

The area for which the County Council is the Local Supervising Authority for the purpose of the Midwives Acts is the whole of the Administrative County with the exception of the Municipal Boroughs of Rowley Regis and Tipton. There are 23 Urban Districts and 10 Rural, with an estimated population at the middle of 1939 of 681,730.

At the 31st December, 93 local Nursing Associations were concerned with the service, including those at Stafford and Essington, which are unaffiliated. In addition, the County Nursing Association Headquarters directly control the work of whole-time

midwives in four areas where either local Associations undertaking general work only preferred not to include midwifery in their activities, or as yet, it has been found impossible to form Associations. The foregoing represents an increase of four in the number of local Nursing Associations and a decrease of two in the number of areas under direct administration. I mentioned last year that on the 1st January, 1939, the Norton-in-the-Moors Nursing Association became responsible for an area in the Parish bearing that name which had previously been served by a whole-time midwife in direct employment. On the 1st July, 1939, the local Association at Aldridge, which had been concerned with general nursing only, took over the whole-time midwife who had been placed in their district by the County Nursing Association. From the same date the midwifery service in the Heath Hayes, Wimblebury and Littleworth district of Cannock was relinquished by the Hednesford Association in favour of a newly-formed Association in that area, which entailed the transfer of one of the three whole-times midwives from Hednesford. In the remaining instance, when the scheme commenced there was one local Nursing Association only in the Urban District of Sedgley, centred at Lower Gornal, which, as a temporary measure, agreed to administer the midwifery service in the whole of the Urban District, with four whole-time midwives. An Association was subsequently formed to supply the general nursing needs of Sedgley proper and Upper Gornal, and they asked for the control of the midwifery service in their area. The request was acceded to, and on the 1st October, 1939, two of the four midwives were transferred to them.

As regards the general question of the district nursing personnel, it has not been necessary to vary the establishment considerably, but several minor alterations have been effected. In the areas with whole-time midwifery the services of three State Certified Midwives were dispensed with, one each in the following districts, viz., Biddulph, Bilston and Wednesbury, the reduced staffs being considered sufficient for local needs. On the other hand, in view of the rapid development of the Wednesfield area, an additional appointment became necessary and a State Registered Nurse was engaged. At the end of 1939 two vacancies existed in part-time areas, one at Oulton and the other at Thorpe, and Village Nurse-Midwives were appointed to fill them. As I have already mentioned, the Norton-in-the-Moors Nursing Association, who have one Queen's Nurse-Midwife, entered the scheme at the beginning of the year, and the services of a whole-time State Certified Midwife were terminated. The position in the Great Barr area of the Aldridge Urban District was also reviewed because of its rapid growth and the consequent increased calls on the local Nursing Association at Streetly. As a result, the County Council agreed to contribute towards an additional nurse and a Queen's Nurse-Midwife was

appointed. The principle of improving the nursing services of the County area generally by the provision of fully trained women to fill vacancies caused by the resignations of those holding the Certificate of the Central Midwives Board only still obtains. The following is a summary of the staff placed in districts, i.e., excluding relief nurses, at the close of the year :—

	WHOLE-TIME MIDWIVES			PART-TIME MIDWIVES		
	S.R.N.,		S.C.M.	S.R.N.,		S.C.M.
	Queen's	S.C.M.		Queen's	S.C.M.	
Affiliated Associations	5	23	35	23	4	49
Unaffiliated „	3	—	2	—	—	1
County Nursing Association Headquarters	—	3	15	—	—	—
Totals ...	8	26	52	23	4	50

S.R.N.—State Registered Nurse. S.C.M.—State Certified Midwife.

As will be seen, there were 163 midwives, 86 whole-time and 77 part-time, compared with 89 and 73, respectively, at the end of the previous year.

The arrangements for relief were described in my last Report when I mentioned that at the 31st December, 1938, a separate staff of 15 nurses was engaged for that purpose. At the end of 1939 this staff numbered 13, viz., 4 Queen's Nurses, 2 State Registered Nurses and 7 holding the Certificate of the Central Midwives Board only.

The development of the general organisation, which was described in previous Reports, has proved satisfactory, and during the period under review no further extension has been necessary.

I mentioned previously that the responsibilities of the Local Supervising Authority and the County Nursing Association as regards the midwifery service had been clearly defined, the County organisation being concerned with administration only, and no difficulties have been experienced in that direction.

As in the previous year, the only portion of the County not covered by the scheme is the Parish of Tutbury (Tutbury R.D.) where there is an efficient unaffiliated Association who, at their own request, are continuing to administer the service. In addition, the Military Barracks at Whittington (Lichfield R.D.) have their own Nurse-Midwife, who is employed by the Soldiers', Sailors' and Airmen's Families Nursing Association.

## POST CERTIFICATE COURSES.

As stated last year, the Rules of the Central Midwives Board governing these Courses came into force on the 1st January, 1939. Early in September, however, intimation was received to the effect that the Minister of Health had approved a proposal of the Board to suspend operation until further notice, presumably in view of the war.

The arrangements made by the County Council for groups of midwives to take courses of four weeks duration at the Sorrento Maternity Home, Birmingham, were accordingly cancelled. During the period the Rules were in operation, however, eight groups were sent, which enabled twenty-one midwives to receive the instruction, i.e., nineteen employed by Nursing Associations, one from a Public Assistance Institution, and one in independent practice.

The financial aspect of the matter was dealt with in the Report for 1938.

## COMPENSATION.

The period allowed by the Midwives Act, 1936, during which midwives could voluntarily surrender their Central Midwives Board Certificates on claiming compensation, or during which Authorities could require surrender, ended on the 30th July, 1939, i.e., at the expiration of three years from the commencement of the Act.

During the first seven months of 1939, twenty-six midwives surrendered their Certificates to this Authority, and the total compensation paid amounted to £9,869 16s. 1d. Neighbouring Local Supervising Authorities were concerned with two of these claims, and their contributions were based on a total of £120 5s. 2d. In one further instance, where the provisions of the Act could not properly be applied, the County Council gave special consideration, and an amount of £250 0s. 5d. was allowed by way of gratuity. The County Council was also concerned with eight applications for compensation made to neighbouring Authorities, the practices of the midwives concerned having extended into the County Area, and the total of the contributions was based on £190 9s. 8d. In no instance was a Certificate demanded during 1939.

In total, during the three years this Section of the Act was in operation, Certificates were voluntarily surrendered by 49 practising midwives resident in the area of which the County

Council is the Local Supervising Authority, compensation being claimed, and a total of £17,385 7s. 8d. was granted. Other Local Authorities were concerned with £496 11s. 10d. of this amount. The County Council was required to contribute in respect of thirteen surrenders which had been made to neighbouring Authorities, the amount involved being £447 18s. 2d. In addition, the Certificates of two midwives were demanded, the compensation amounting to £29 11s. 3d. It will be seen, therefore, that the total compensation with which the County Council was concerned, excluding the £250 0s. 5d. allowed by way of a gratuity, was £17,366 5s. 3d. In this connection the Act provided for an Exchequer Grant of fifty per cent., so that the balance borne by the County funds was £8,683 2s. 8d.

### MIDWIVES ACTS, 1902-1926.

As stated in the previous section of the Report, the work undertaken under these Acts relates to the Administrative County with the exception of the Municipal Boroughs of Rowley Regis and Tipton, and at the middle of 1939 the area had an estimated population of 681,730. In addition to the two districts mentioned, the area in which the County Council is responsible for maternity and child welfare purposes, does not include the Municipal Boroughs of Bilston, Newcastle, Stafford and Wednesbury, and the Urban Districts of Cannock and Coseley, so that the population in this respect is reduced to 452,560.

There are three Supervisors of Midwives, one medical and two non-medical, who, in addition, are responsible for other duties in connection with the Health Visiting Scheme. In 1939, 1,085 visits and interviews were undertaken for midwifery purposes.

On the 31st December there were 217 domiciliary midwives resident in the County area who were actually practising, 163 district (86 whole-time; 77 part-time) and 13 relief midwives employed by Nursing Associations under the Scheme, one employed by the Whittington Barracks Nursing Association outside the scheme, and 40 in independent practice. Included in the latter figure are 10 midwives who were also engaged at registered Maternity Homes, and in addition, there were 11 maternity home keepers who do not undertake domiciliary cases. Nineteen out-of-area midwives, including two employed by Nursing Associations whose areas extend into Staffordshire, were in active practice at the end of the year. None of the midwives resident within the County is *bona fide*.

In addition to the routine inquiries conducted by the Supervisors of Midwives, three irregularities were specially investigated.

As a result, two midwives received letters of caution and one was interviewed by the County Council acting as the Local Supervising Authority and was censured.

Since the Act came into operation in 1902, the names of 115 midwives have been removed from the Roll in consequence of action taken by the Local Supervising Authority.

No applications were received during the year from independent midwives for compensation for loss of practice consequent upon suspension from duty after contact with infection.

As will be seen from the following table, the majority of the midwives resident in the County area are under 45 years of age :—

	21-44	45-64.	65 and upwards
Salaried :—			
District .. ..	110	52	1
Relief Staff .. ..	6	7	—
Independent .. ..	22	18	1
Maternity Home Keepers only .. ..	6	5	—
	—	—	—
	144	82	2
	—	—	—

During the year, 10,551 cases, 10,225 live and stillbirths and 326 miscarriages and abortions, were attended by domiciliary midwives, and the following summary indicates the numbers taken by each class of midwife :—

	Cases.
Salaried :—	
Whole-time .. .. .. ..	7,342
Part-time .. .. .. ..	2,146
Independent resident in County, including Association Midwife .. .. ..	895
Out-of-Area including Association midwives..	168
	—
	10,551
	—

Roughly, the average number of cases taken by each whole-time salaried midwife was 85.

In the table which follows more detailed information of the cases attended is given :—

	Total Births (Live and Still-born)	*As Midwives		†As Maternity Nurses.		‡ Births in respect of which no record is available.	
		Births	% of total	Births	% of total	No.	% of total
Live and Stillbirths	12284	8397	68.3	1828	14.9	2059	16.8
Abortions & Miscarriages	—	223	—	103	—	—	—

\* Doctors not having been engaged for the confinements.

† Doctors having been engaged by the patients.

‡ These figures are in respect of births which (i) were attended by doctors, no midwife having been engaged ; (ii) took place outside the Administrative County ; (iii) took place in Institutions.

Live and stillbirths numbering 414 and 412, respectively, occurred at Public Assistance Institutions and Maternity Homes, 10 abortions and miscarriages also occurring at the former and one at the latter.

The Rules of the Central Midwives Board require certain notifications by midwives, and particulars are given in the following table. The last two years only have been included in view of the curtailment of the area in 1937.

Year.	* No. of Births attended by midwives.	Medical Aid Notices.	Stillbirths.	Death of Mother.	Death of Child.	Contact with infection.	Laying out the dead.	Artificial Feeding.
1938	8730	4283	222	9	174	158	44	249
1939	8778	4297	222	5	206	161	38	262

\* Including midwifery cases in Maternity Homes.

The percentage of doctors' calls to the number of births attended by midwives in each year was 49. In 1915 the corresponding figure was 10.7 per cent., and the large gradual increase since can be ascribed to the trained type of midwife now practising.

The following figures show the causes which occasioned the sending for medical assistance:—

PREGNANCY :

Disproportion .. .. ..	54
Query Presentation .. .. ..	38
Threatened Abortion .. .. ..	95
Puffiness of face and hands .. .. ..	49
Fainting .. .. ..	2
Varicose Veins .. .. ..	41
Fits .. .. ..	7
Vaginal Discharge .. .. ..	17
Unsatisfactory condition and general health .. .. ..	284
Excessive Sickness .. .. ..	40
Loss of Blood .. .. ..	104
History of previous Stillbirths and Abortions .. .. ..	8
Œdema of Legs .. .. ..	10
Albuminuria .. .. ..	227
Contracted Pelvis .. .. ..	7
Blood Pressure .. .. ..	35
Cardiac .. .. ..	6
Sugar .. .. ..	7
Total ..	1031

LABOUR :

Premature Birth .. .. ..	18
Abnormal Presentation .. .. ..	85
Delayed or Difficult .. .. ..	726
Placenta Prævia .. .. ..	8
Hæmorrhage ante-partum .. .. ..	69
Ditto post-partum .. .. ..	60
Eclampsia .. .. ..	9
Prolapse of Cord .. .. ..	16
Lacerated Perinæum .. .. ..	856
Retained Placenta and Membranes .. .. ..	89
Unsatisfactory Condition .. .. ..	99
Inertia .. .. ..	106
Abortion .. .. ..	147
Purulent Discharge .. .. ..	1
Albuminuria .. .. ..	9
Total ..	2298

LYING-IN :

High Temperature .. ..	..	169
Inflamed and painful leg .. ..	..	56
Convulsions .. ..	..	2
Unsatisfactory Condition .. ..	..	93
Offensive Lochia .. ..	..	6
Unusual Swelling of Breasts .. ..	..	26
Abdominal Swelling and tenderness .. ..	..	2
		<hr/>
	Total ..	354

CHILD :

Deformities .. ..	..	21
Convulsions .. ..	..	11
Inflamed and discharging eyes .. ..	..	203
Feebleness and prematurity .. ..	..	149
Unsatisfactory Condition .. ..	..	160
Rash .. ..	..	14
Pemphigus .. ..	..	5
Spina Bifida .. ..	..	16
Hare Lip and Cleft Palate .. ..	..	5
Club Foot .. ..	..	4
Jaundice .. ..	..	21
Hæmorrhage—Bowel .. ..	..	5
	<hr/>	
	Total ..	614
	<hr/>	
Grand Total .. ..	..	4297
	<hr/>	

During the financial year ended March, 1940, 4,256 notifications of sending for medical help were received, and, out of this number, Medical Practitioners claimed their fees from the County Council in 2,319 cases, that is, 54.5 per cent. of the possible claims.

In the last two financial years the fees paid by the County Council were as follows:—

Financial Year	No. of Notifications of sending for Medical Aid	No. of Claims received	Percentage of claims received to Notifications	Total amount paid to Doctors during year	Amounts recovered from Patients during year
1938-39	4402	2424	55	£ 3513 18 9	£ 1593 16 0
1939-40	4256	2319	54	3614 6 6	1576 17 10

Here again, an increase is indicated, for in the financial year 1925-26 the percentage of claims was 35.

No alteration has taken place in the income scale which came into operation on the 1st October, 1934.

#### INFLAMED AND DISCHARGING EYES.

Year	Notified	CASES			Vision Un- impaired	Vision Impaired	Total Blind- ness	Deaths				
		TREATED										
		At Home	In Hospital In- pat'nt	Out- pat'nt								
1938	193	166	11	16	191	—	—	2				
1939	203	180	20	3	203	—	—	—				

The 203 cases in 1939, 172 of which were not severe, include medical aid calls for all unsatisfactory eye conditions and not notified cases of Ophthalmia Neonatorum only. The County Council are concerned with the notification and treatment of the latter condition in their Health Visiting Area, which is dealt with later in the Report.

#### STILLBIRTHS.

In the area now administered by the County Council under the Midwives Acts, 483 stillbirths were registered during the year. As already indicated, 222 were reported by midwives, a figure which has varied little during the last 16 years, and the causes were as follows :—

Albuminuria	..	..	..	1
Asphyxiated	..	..	..	1
Cord round Neck	..	..	..	4
Deformities	..	..	..	20
Difficult Labour	..	..	..	15
Fall and Shock	..	..	..	1
Injury during birth	..	..	..	1
Ill-nourishment	..	..	..	1
Maceration	..	..	..	96
Malpresentation	..	..	..	8
Premature..	..	..	..	56
Spina Bifida	..	..	..	5
Unsatisfactory Condition of Mother				13

#### PUERPERAL PYREXIA REGULATIONS.

Puerperal Pyrexia is defined as any febrile condition occurring in women within 21 days after childbirth or miscarriage, in which a temperature of 100.4 or more has been sustained during a period of 24 hours, or has recurred during that period.

The following are particulars of the notifications from the Administrative County during 1939 :—

	In area of County Local Supervising Authority.	In areas of other Authorities.	Total
Urban Districts	84	11	95
Rural Districts	39	—	39
	—	—	—
	123	11	134
	—	—	—

The case rate for Puerperal Pyrexia per thousand total births (live and still) for Staffordshire is 9.66, as compared with 14.35 for England and Wales.

As will have been observed from a previous table, in the area administered by the County Council as Local Supervising Authority the midwives summoned medical assistance for rises of temperature on 169 occasions. These were specially investigated by the Supervisors, and it was found that in 111 instances the unsatisfactory conditions were due to abnormalities which could be said to arise directly from childbirth.

The facilities provided in the Health Visiting Area are mentioned in the appropriate section of the Report.

### **MATERNITY AND NURSING HOMES.**

The County Council are responsible for the registration and inspection of these Homes in their area as Local Supervising Authority under the Midwives Acts.

At the end of the year the number of premises registered was 21 ; three exemptions from registration previously allowed were continued. Five applications were received and acceded to in 1939, and four Homes were given up. Of the 21 Homes registered, seven have more than two beds each. The County Council have not delegated any of their powers under Section 194 of the Public Health Act, 1936, or earlier provisions, nor have any applications been received for such delegation.

### **COUNTY COUNCIL MATERNITY UNITS.**

In normal times, at the Sedgley Public Assistance Institution there is a special block known as the Rosemary Ednam Maternity Home, and at the Wordsley Institution a special unit, where beds for paying and other patients are provided. As a result of the Emergency Hospital Scheme, in September the activities in this direction at Wordsley were suspended for the duration of the war, whilst those at Sedgley were curtailed.

The arrangements made by the County under their Health Visiting Scheme are dealt with in the appropriate section of the

Report. In addition, however, arrangements exist at the Mrs. Legge Memorial Home, Wolverhampton, for the reception of prospective unmarried mothers. In 1939, seven cases were admitted.

### MATERNAL MORTALITY.

In the accompanying table the maternal mortality rate for the Administrative County, showing the deaths per thousand (live and still) births in the last ten years, is given.

Year	Total (Live and Still) Births	DEATHS FROM		Maternal Mortality per 1,000 (Live and Still) Births	
		Puerperal Sepsis	Other Diseases and Accidents of Parturition	Staffs.	England and Wales
1930	13,823	22	23	3.2	4.2
1931	13,338	11	29	3.0	3.9
1932	12,917	21	29	3.9	4.0
1933	11,960	19	18	3.1	4.3
1934	12,497	28	27	4.4	4.4
1935	12,751	20	35	4.3	3.9
1936	12,995	14	33	3.6	3.6
1937	13,485	15	33	3.6	3.1
1938	13,834	12	28	2.9	3.0
1939	13,874	13	28	3.0	2.8
Mean for 10 years	13,147	17.5	28.3	3.5	3.7

It will be observed that the maternal mortality rate for 1939 is practically the same as that for last year, although on this occasion it is slightly higher than that for England and Wales as a whole. Since 1934 there has been a downward tendency and it is satisfactory that the latest rate is in keeping with the fall.

Thirty-seven of the maternal deaths occurred in the area of the Local Supervising Authority, and of these five were reported by midwives in accordance with their rules, i.e., the deaths occurred whilst they were actually in attendance as midwives or maternity nurses.

The services provided by the County Council in connection with the efforts to reduce maternal mortality are detailed in the Health Visiting Section of the Report.

### INFANTILE MORTALITY.

The infant mortality rate for 1939 was 58 per thousand live births, as against 57 in the previous year. The rate in Urban Districts was 57 compared with 58 last year, and in the Rural Districts 60 compared with 51. In England and Wales in 1939 the infant mortality rate was 50 compared with 53 last year. In the table below are shown the rates for the last ten years and also those for England and Wales as a whole. Also shown in this

table are the various causes of infantile deaths in Staffordshire for the same period.

CAUSES OF DEATH	TOTAL DEATHS UNDER ONE YEAR OF AGE								1939
	1930	1931	1932	1933	1934	1935	1936	1937	
Measles ...	17	14	15	11	13	8	7	7	2
Scarlet Fever ...	...	...	...	...	...	...	...	...	1
Whooping Cough ...	21	25	23	13	21	29	18	19	14
Diphtheria ...	3	1	2	3	—	3	4	2	2
Influenza ...	...	...	16	12	13	3	5	13	5
Cerebro-Spinal Fever ...	...	...	1	4	2	4	4	9	6
Tuberculosis of Respiratory System ...	...	...	—	1	—	—	2	2	1
Other Tuberculous Diseases ...	...	...	12	9	14	6	7	12	8
Syphilis ...	...	...	—	2	4	3	2	2	8
Cancer, Malignant Disease ...	...	...	—	1	—	—	—	—	1
Heart Disease ...	...	...	—	1	—	—	—	—	—
Other Circulatory Diseases ...	...	...	—	1	—	—	—	—	—
Bronchitis ...	43	41	39	50	27	42	31	29	—
Pneumonia (all forms) ...	120	169	134	126	90	127	121	115	25
Other Respiratory Diseases ...	...	...	3	3	1	1	5	2	34
Diarrhoea, etc. ...	...	...	4	3	6	78	66	52	120
Appendicitis ...	...	...	—	—	—	—	—	—	4
Cirrhosis of Liver ...	78	74	86	75	55	—	—	52	55
Other Digestive Diseases ...	...	...	—	—	—	—	—	—	—
Acute and Chronic Nephritis ...	...	...	—	1	—	—	—	—	—
Congenital Debility, Premature Birth, Malformations, etc. ...	...	...	—	12	16	14	10	11	—
Violence ...	...	...	...	1	2	1	—	6	5
Other Defined Diseases ...	...	...	—	—	—	—	—	—	14
Causes Ill-defined or unknown ...	...	...	1	1	—	—	2	—	—
<b>TOTALS</b> ...	848	896	859	796	689	808	837	789	751
Death rates per 1,000 Live Births.		Staffordshire	England and Wales						770
	64	70	69	57	66	67	61	57	58
	60	66	65	59	57	59	53	53	50

The preceding table is self-explanatory but attention is again called to the fact that the largest group of deaths were due to causes described as congenital debility, premature birth, malformations etc., on which I particularly commented last year. The table which follows has been prepared to deal specially with this group:—

Year	Live Births	Deaths of Children under one year of age from Congenital Debility, Malformations, Premature Birth Etc.	Death-rate per 1,000 Live Births
1930	13,243	401	30.3
1931	12,752	446	35.0
1932	12,335	436	35.3
1933	11,424	403	35.3
1934	11,951	401	33.5
1935	12,174	403	33.1
1936	12,441	465	37.4
1937	12,885	474	36.8
1938	13,252	415	31.3
1939	13,324	454	34.1

Two hundred and six deaths were reported by the midwives, having occurred whilst they were in attendance. One hundred and fifteen of these were due to feebleness and prematurity, and 22 to deformity and malformation.

## HOSPITALS.

In my Annual Report for 1930, full details were given of the County's Hospital Services. Last year I explained the position, which has not changed, regarding the establishment of Public Assistance Hospitals under the Local Government Act, 1929, and in the appropriate section of this Report reference is made to Isolation Hospital provision.

The extensions at the County's Orthopædic Hospital at Standon Hall have not yet been proceeded with and 120 beds are therefore still available for the various Committees. During 1939, 168 cases were treated for the Joint Board for Tuberculosis, 35 for the Education Committee, 7 for the Public Assistance Committee, and 21 under the Health Visiting Scheme. In addition, decants from the Hartshill Orthopædic Hospital were received under the Emergency Hospital Scheme.

## CLINICS AND TREATMENT CENTRES.

The number of Clinics and Treatment Centres was set out in detail in the 1930 Report, and the changes in each subsequent year have been stated in my Annual Report.

The changes in Infant Welfare Centres which have taken place during 1939 are given in the section of the Report below, dealing with the Health Visiting Scheme.

## HEALTH VISITING SCHEME.

As I have already mentioned, the County Health Visiting Area consists of 17 Urban and 10 Rural Districts, which have a total population of 452,560.

Except for an extension affecting Infant Welfare Centres and Ante-natal Clinics there has been practically no variation in the scheme during the period under review. The commencement of the war in September had little effect on the normal activities and there is nothing of an exceptional nature to report.

The satisfactory standard of the services was maintained and the following are brief details under each of the various headings.

### INFANT WELFARE CENTRES.

There are 36 Combined Centres (i.e., Minor Ailment Clinics and Welfare Centres) and 31 Welfare Centres. In addition, there is one Voluntary Welfare Centre.

Under the extension which took place in June, an additional half-day session per week was given to the Aldridge and Brierley Hill Centres, the sessions at Blythe Bridge, Bolehall and Brewood, became weekly instead of fortnightly, and at Essington fortnightly vide monthly. Bolehall, which was formerly combined, became a Welfare Centre only.

In November three new Centres were opened at Pheasey Estate, Wheaton Aston and Shelfield. The latter is combined and, in view of the area it serves, those at Pelsall and Rushall became unnecessary and were closed.

Normal changes in premises took place at Brewood, Norton Canes and Short Heath, for improved accommodation.

When evacuation commenced as a result of the war it was necessary temporarily to extend the sessions of several combined Centres, and an additional Centre of this type was established at Ashley, which was ultimately dispensed with early in 1940.

At Aldridge, Chasetown, Fazeley, Kidsgrove, Stone and Tettenhall, the Centre premises were required for military or air raid precautions purposes, but alternative accommodation was readily available and there was little disorganisation. At Chasetown we have already returned to the original premises. In view of the change at Tettenhall a Combined Centre reverted to a Welfare Centre only.

In total, 3,621 Welfare Centre sessions were held in 1939 against 3,316 in the previous year, 68,699 attendances being made by children under one year of age and 58,799 by children between one and five years. The numbers of children in these groups who attended for the first time during the year were 4,811 and 1,767, respectively.

#### ANTE-NATAL CLINICS.

Thirty-six of the Welfare Centres are fully equipped for ante-natal work, and at 21 special sessions are held for this purpose, compared with 15 at the end of 1938.

Under the extension of the scheme in June, special fortnightly sessions were commenced at Aldridge, Biddulph, Featherstone and Sedgley, whilst at Brierley Hill and Willenhall an additional half-day per week was given for this work. The sessions at Leek became fortnightly instead of monthly.

Special clinics are held in connection with the newly established Centres at Pheasey Estate and Shelfield.

During 1939, 2,819 expectant mothers attended the Clinics, with a total attendance of 8,586.

Where treatment is required, the patient is referred to her own doctor, through the medium of the midwife, if one has been engaged, except for unsatisfactory dental conditions. Treatment of the latter can be given under the County Council Scheme, and the patients are offered the facilities provided.

#### RURAL ANTE-NATAL SCHEME.

Under this scheme, which operates mainly in Rural areas where there are no Ante-natal Clinics, 644 expectant mothers were examined by their own doctors, compared with 717 in 1938.

From the reports submitted, it was found that 479 confinements could safely be conducted by midwives at the patients' homes, but special advice was necessary in 45 instances. In 129 cases further examinations were recommended, the attendance of doctors at the confinements being advised in 23 instances, whilst two patients were recommended X-Ray examination. Apart from the foregoing, the primary examinations revealed that eighteen patients should be delivered in hospital and eighteen others were referred to Consulting Obstetricians.

In addition, 37 of the women were offered dental treatment and one was recommended extra-nourishment.

## CONSULTING OBSTETRICIANS.

The General Practitioners can, where necessary, obtain the assistance of a Specialist at any time during pregnancy, labour or the puerperium. In 1939, Consultants were concerned with 316 cases, as against 292 in the previous year.

The Birmingham Maternity Hospital have a mobile obstetric unit, which operates with an Obstetrician and trained nurses where the patient's illness prevents her removal, and the County Council have agreed to pay the cost for cases dealt with in their Health Visiting Area.

## MATERNITY HOME AND HOSPITAL TREATMENT.

Arrangements exist at many hospitals and maternity homes for the reception of women whose physical condition or environment is such that confinement at home is unsafe or undesirable. During the year, 227 patients were dealt with in this way, and 94 were admitted to the maternity wards of Public Assistance Institutions, compared with 213 and 48, respectively, last year.

In addition, 26 women were admitted to a Maternity Home but paid their own fees, the County Council merely giving a guarantee against default.

## MATERNITY OUTFITS.

During the last year, 225 outfits were sold at full cost, compared with 174 the year before, 2 were sold at half-cost and 20 free issues were made.

## PAYMENT OF MIDWIVES' FEES.

In order to retain the very essential ante-natal co-operation by the independent midwives, a compensation fee of 10s. 0d. is allowed where a case is lost as a result of County Council activities. During 1939, two such payments were made.

## PUERPERAL PYREXIA.

In the Health Visiting Area a Consultant and Hospital Service is at the disposal of the General Practitioners. During the period under review 92 cases were notified, and Specialists' opinions were obtained in seven instances, 34 patients being sent to hospital. In addition, it was ascertained that 16 women from the area were sent to hospital through other agencies.

## OPHTHALMIA NEONATORUM.

Sixty-four cases were notified from the Health Visiting Area during 1939, and in 55 instances home nursing was carried out by the Health Visitors. Five children attended hospitals as out-

patients and nine were admitted for treatment. In 60 cases the vision was unimpaired, the remaining four children being still under treatment at the end of the year. One child was still under treatment at the end of 1938 and the result was satisfactory.

The County Council provide hospital treatment, and, during the year, the list was extended to include the Guest Hospital, Dudley.

#### OPHTHALMIC TREATMENT.

The eye cases in children under 5 years of age, seen during the year by the County Ophthalmic Surgeon, included 97 new ones. For 67 of these, mostly cases of squint, glasses were prescribed: the Health Visiting Committee provided them in 11 cases and allowed one-half of the cost in respect of four others. Generally, where there was unilateral squint the sound eye was occluded, but if this was found to be impracticable, atropine was inserted weekly until it was found possible to have the eye occluded. These children were kept under constant supervision.

In five of the remaining 30 cases advice or treatment was necessary, and this was given.

Patients seen in previous years were re-examined during 1939, and the total number of attendances at the Clinics, including both old and new cases, was 336.

#### ORTHOPÆDICS.

The County Council have not established any Orthopædic Clinics, but have arrangements with voluntary bodies who have established Clinics at Leek, Stourbridge, Hartshill, Birmingham, Stafford, Lichfield, Tamworth, Walsall and Dudley, where cases are received on payment.

One hundred and twelve new cases, as against 108 last year, were sent to Orthopædic Clinics for out-patient treatment in the first instance, as follows:—

Bow Legs .. ..	23
Deformities of Feet .. ..	33
Deformities of Hands .. ..	2
Knock Knees .. ..	17
Paralysis .. ..	13
Rickets .. ..	3
Torticollis (Wry-neck) .. ..	4
Miscellaneous .. ..	15
Examined but treatment not necessary .. ..	2

It will be noted that only three cases of rickets are given in this list, but of course there are many more conditions classified under other headings, of which rickets has probably been the primary cause.

I give below details of the out-patient attendances etc., during the year :—

Number of children on books at 31.12.38 ..	204
New cases referred during 1939 ..	112
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	316
Removals on account of :—	
Discharged cured .. ..	22
Left the area .. ..	11
Attained school age .. ..	39
Treatment refused .. ..	33
Died .. .. ..	4
No treatment found necessary .. ..	2
Unsuitable for treatment .. ..	2
	— 113
<hr/>	
Number of cases at end of year ..	203
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The total number of attendances at Out-Patient Clinics during the year was 2,634.

Twenty-one children received in-patient treatment at Standon Hall Orthopædic Hospital, nine of whom were admitted during the year. As mentioned in previous Reports, pending the extension of accommodation at Standon Hall, the Health Visiting Committee have authorised the use of five beds at outside institutions. These are used mostly for short stay cases. In this way seventeen children under five years of age received in-patient treatment, ten being admitted during 1939. Thirteen patients were treated at the Hartshill Orthopædic Hospital, and four at the Birmingham Cripples' Hospital.

#### ARTIFICIAL LIGHT TREATMENT.

In view of the war, the premises being required for a First Aid Post, the Clinic at the Lichfield Infant Welfare Centre had to be discontinued in September, so that the facilities are now mainly confined to the Leek area. Authority was, however, given for cases to be referred to the Walsall Clinic.

Forty-five children were treated, 26 being referred for the first time during the year, with a total attendance of 1,174, for the following conditions :—

Abnormal Glands .. ..	4
Bronchitis .. ..	2
Cervical Adenitis .. ..	5
Debility and Malnutrition .. ..	19
Delayed Dentition .. ..	1
Rickets .. ..	14

## DENTAL TREATMENT.

Under this scheme, which has now been in operation for four complete years, 1,351 patients received treatment during 1939, compared with 1,563 in the previous year.

The only administrative change during the period under review was the addition of Madeley to the list of centres where sessions of special clinics are held.

Apart from the County Health Visiting Area, a similar service is undertaken, at an agreed payment, on behalf of the Stafford Corporation Welfare Committee.

The following are particulars supplied by Mr. W. H. Jones, the County Dental Officer, in respect of patients from the County Health Visiting Area during 1939 :—

### *Expectant and Nursing Mothers—*

Nine hundred and three cases were referred by the Assistant Medical Officers from Ante-natal Clinics and by General Practitioners under the Rural Ante-natal Scheme, 620 of whom accepted dental treatment. In addition, the treatment of 400, which had been commenced in the previous year, was completed, so that in total the dental staff was concerned with 1,020 patients during 1939. The number of attendances made for treatment was 4,660, but no less than a further 992 appointments were not kept. It is realised, of course, that the expectant or nursing mother has many reasons which may prevent her from keeping appointments, but a percentage of 17.6 is unduly high, although an explanation may be found in the national emergency which existed in the last four months of the year. It is the general experience, however, that after the relief of toothache many patients do not make further attendances for completion of treatment. The number of half-day sessions devoted to the treatment of these cases was 868.

The following are particulars of the operations completed during the year :—

Extractions ..	..	5,525
Fillings ..	..	113
Scalings ..	..	102
Sundries ..	..	2,270
New Dentures ..	..	713
Repairs to Dentures ..	..	11
		—
		8,734
		—

In 29 instances patients were admitted to Institutions for the administration of general anæsthetics.

The artificial dentures, together with repairs, were all completed in the County Dental Laboratory.

*“Toddlers”*—

The number of “toddlers” dealt with was 331, and thirty-six half-day sessions were occupied in their treatment. Three hundred and forty-four attendances were made, and on 335 occasions the child was accompanied by a parent.

The treatment comprised :—

Extractions of temporary teeth ..	458
Dressings of Silver Nitrate ..	276
Fillings in temporary teeth ..	10
Advice .. ..	48
	—
	792
	—

**EXTRA-NOURISHMENT.**

This scheme was fully described last year, and in 1939 the numbers of patients who received extra-nourishment were as follows :—

	<i>Expectant and Nursing Mothers.</i>	<i>Children under 5.</i>
Dried foods only ..	318	728
Dried foods and eggs ..	65	24
Dried foods and butter ..	1	—
Dried foods, eggs and butter	3	—
Dried foods, eggs and liver ..	1	—
Dried foods, eggs and emulsion	3	4
Dried foods and emulsion ..	12	158
Emulsion only .. ..	—	48
Eggs only .. ..	—	2
	—	—
	403	964
	—	—

The totals of the the free issues were 27,890 lbs. of dried milk ; 1,755 eight-ounce bottles of emulsion ; 6,984 eggs ; 24-lbs. of butter ; and 8-lbs. of liver.

As regards evacuees, in total 318-lbs. of dried milks and four 8-oz. bottles of emulsion were issued.

For the whole of the year, the County Council continued their grant to the Kidsgrove and District Social Services Clubs, who supplied milk at  $\frac{1}{2}$ d. per third of a pint for expectant and nursing mothers and children under 5 years of age, quite apart from extra-nourishment recommended on medical grounds.

Early in the year authority was given for a representative of the National Milk Publicity Council to attend the Welfare Centres and give talks to the mothers on “The Food Value of Milk.”

## NOTIFICATION OF BIRTHS.

During 1939, 7,401 live births and 280 stillbirths were notified in the Health Visiting Area, 7,397 by midwives and 284 by parents and doctors. The births registered during the year, i.e., 7,702 live births, and 310 stillbirths, cannot strictly be compared with those notified because of the period allowed by law for each purpose.

## INFANT LIFE PROTECTION.

The work carried out by the Health Visitors under this scheme is shown in the following table :—

Number of children on Register at the end of December, 1939 ..	41
Number of reports on visits to chil- dren received during the year 1939 .. .. ..	460
Number of new cases during 1939, for which preliminary reports were sent in by Health Visitors	13
Number of foster-parents on Register at end of 1939 .. .. ..	40

## HEALTH VISITORS.

At the end of 1939 there were 60 whole-time Health Visitors, two of whom are Lecturers on Mothercraft, serving a population of approximately 375,440. The remainder of the Health Visiting Area, mainly in the Rural Districts, is now served by 42 part-time Health Visitors, i.e., District Nurses employed by local Associations, and they are responsible for a population of approximately 77,120.

The foregoing represents an increase of three whole-time Health Visitors as compared with the staff at the end of the previous year. This was due to the fact that the work in the Aldridge, Brierley Hill and Willenhall Urban Districts, had increased to such a noticeable extent that additional appointments had to be made in 1939.

The visits paid by the Health Visitors during the year were as follows :—

To expectant mothers :—			
(1) First visits .. ..	2,041		
(2) Total visits .. ..	6,025		
To infants under one year :—			
(1) First visits .. ..	7,559		
(2) Total visits .. ..	65,320		
To children—one-five years :—			
Total visits .. .. ..	110,096		

In 1939 the Health Visitors reported to local Medical Officers of Health 122 instances of insanitary conditions.

#### LECTURES ON MOTHERCRAFT.

The lectures to mothers which were instituted nine years ago, have continued at the Infant Welfare Centres. During the year talks were given by the two Lecturers at 401 sessions of 46 Centres in various parts of the Health Visiting Area, the total attendance being 12,391.

#### DENTAL LABORATORY.

The Dental Laboratory established by the County Council in 1937 has continued to give useful service with its full complement of four mechanics. During 1939, the output of completed work was as follows :—

New dentures	..	..	1,274
Repairs to dentures	..	..	62
Orthodontic appliances	..	..	7
Repairs to equipment for dental clinics	..	..	18
			<hr/>
			1,361
			<hr/>

#### COUNTY BACTERIOLOGICAL LABORATORY.

The County Bacteriologist and Pathologist reported that during 1939, 118,512 investigations were conducted at the County Bacteriological and Pathological Laboratory, being a reduction of 2,381 as compared with the previous year. Of these, 94,837 were of a general bacteriological and serological nature ; 3,138 were in respect of biochemical and pathological investigations (excluding medico-legal work) ; 49 were bacteriological, biochemical and pathological investigations in connection with medico-legal work ; and 20,488 were for the diagnosis and tests for cure of venereal diseases.

The general bacteriological and serological work was for the most part from the Administrative County, but of the milk examinations, 1,346 were undertaken for the City of Stoke-on-Trent, 72 for the County Borough of Dudley, and 5 for the County Borough of Derby.

Of the tests for venereal diseases, 8,272 were from patients resident in the Administrative County, 8,248 from patients resident in the City of Stoke-on-Trent, 1,005 from patients resident in the County Borough of Dudley, 978 from patients resident in the County of Worcester, 514 from patients resident in the Kesteven

Division of Lincolnshire, 667 from patients resident in the County Borough of Walsall, and 604 from patients resident in other areas outside the Administrative County. In addition, 200 Wassermann tests were conducted during the year in connection with a special comparison with the Ministry of Health Laboratory.

The bulk of the bacteriological work was in relation to the direct diagnosis and prevention of infectious diseases, the supervision of the milk supply, and the bacteriological examination of drinking waters for the various Sanitary Authorities.

The arrangement for conducting the bacteriological, pathological and biochemical investigations for the London Road Hospital of the City of Stoke-on-Trent, still continued, and this Institution has made extensive use of the Laboratory.

The various biochemical and pathological investigations were conducted for the Staffordshire General Infirmary; Standon Hall Orthopædic Hospital; the North Staffordshire Cripples' Aid Society; the Cottage Hospital, Newport, Shropshire; the Victoria Hospital, Lichfield; Tamworth General Infirmary; London Road Hospital, Stoke-on-Trent, and in connection with medico-legal work.

Supervision of the subsidiary laboratory at Sandfield Hospital, Wordsley, was exercised, and blood counts were done at intervals on the staff of the Institution who were exposed to radium.

In connection with the Blood Transfusion Service, blood grouping of volunteers as donors was carried out at Sandfield Hospital, Wordsley, Sedgley and Lichfield Public Assistance Institutions, and, in addition, on a number of volunteers sent to the Laboratory from the Staffordshire General Infirmary.

The researches into the prevention of Brucella infections in man and animals in the County have been continued this year.

In connection with puerperal sepsis and maternal mortality, the increasing tendency to submit swabs for examination for hæmolytic streptococci has been maintained and the Practitioners, Hospital Authorities, Medical Officers of Health and the whole-time County Staff, have co-operated in this work.

Experience has shown that in all suspected cases of food poisoning it is of the utmost importance to submit specimens of faeces and vomited material for bacteriological examination as soon as possible after the onset of the symptoms. Samples of blood should also be taken throughout the course of the illness, and in every instance the suspected article of diet, when available, should also be forwarded for investigation.

The details of the year's work are as follows :—

GENERAL BACTERIOLOGY AND PATHOLOGY.

		First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Totals
Water Examinations	...	180	144	129	110	563
Milk Examinations	...	7,554	6,741	6,412	5,184	25,891
Diphtheria	...	10,881	7,373	5,495	5,769	29,518
Tuberculosis	...	2,438	2,275	1,841	1,263	7,817
Cerebro-spinal Fever	...	95	13	24	9	141
Streptococcal Infections	...	1,581	831	804	786	4,002
Ringworm	...	7	19	7	6	39
Typhoid and Paratyphoid Fever	...	317	447	654	395	1,813
Brucella Infections	...	89	114	198	206	607
Dysentery (all types)	...	461	661	860	502	2,484
Food Poisoning	...	618	914	1,477	795	3,804
Medico-legal Investigations		35	14	—	—	49
Veterinary Work (other than milk)	...	6,173	4,766	708	628	12,275
Other Examinations	...	2,087	1,206	1,462	1,128	5,883
<b>TOTALS</b>	...	<b>32,516</b>	<b>25,518</b>	<b>20,071</b>	<b>16,781</b>	<b>94,886</b>

The 7,817 examinations under "Tuberculosis" included 5,963 sputa; 140 specimens of pus; 132 cerebrospinal fluids; 84 other fluids; 402 urines; 40 faeces; 474 biological tests; 6 specimens of human organs and tissues; 536 cultures and 40 others.

The 607 investigations under the heading "Brucella Infections" included 266 specimens of blood from human beings, 10 of which gave agglutination reactions varying from 1 in 25 to 1 in 12,500. Eighty-eight samples of blood from cattle were also examined, and, in addition, 465 tests on samples of milk and 12,169 other tests were conducted.

The majority of the serological tests for food poisoning were done for exclusion purposes, and, fortunately, proved negative, but there were six cases of mild *Salmonella* infection in various parts of the County.

The 5,883 "Other Examinations" included 1,487 bacteriological and cytological examinations of various body fluids and exudates; 134 blood cultures; 396 examinations for Vincent's Angina; 441 general examinations of urines; 2,481 swabs for other pathogenic micro-organisms; and various miscellaneous investigations.

The 25,891 "Milk Examinations" were constituted as follows:—

Cleanliness and Phosphatase Tests	..	20,314
Biological Tests	..	4,960
Investigations of Brucella infections	..	465
Cultures for Streptococci, etc.	..	125
Grouping Streptococci	..	4
Direct film for acid fast bacilli	..	2
Examination of washings from utensils	..	18
Examination of Foreign Bodies in Milk bottles		2
Biochemical test for blood	..	1
		25,891

As regards the biological, cleanliness and phosphatase examinations, the purposes of the tests are shown in the accompanying table, and it will be specially noted that 2 samples of "Tuberculin Tested" milk and 14 of "Accredited," gave positive biological reactions for tuberculosis.

	* Coli and/or Reductase ; or Count and Phosphat- ase.			Biological Tests.			Grand Total.
	Satis- factory.	Unsatis- factory.	Total.	Nega- tive.	Posi- tive.	Total.	
For "Accredited" Standard and Licence ...	11810	3146	14956	326	14	340	15296
For "Tubercu- lin" Tested Standard and Licence ...	232	38	270	214	2	216	486
For "Tuberculin Tested" (Pas- teurised) Standard ...	1	—	1	5	—	5	6
For Pasteurised Standard ...	166	6	172	126	—	126	298
Food and Drugs Acts ...	1524	659	2183	1944	121	2065	4248
School Milks ...	197	63	260	231	22	253	513
Submitted by farmers, retail- ers and others for their own information ...	41	26	67	9	2	11	78
 Totals ...	13971	3938	17909	2855	161	3016	20925

\* The above figures represent the number of *samples* examined.

The following tests were involved :—

Count and/or Coli ..	..	..	..	2,409
Reductase ..	..	..	..	17,678
Phosphatase ..	..	..	..	227
Biological ..	..	..	..	4,960
			Total ..	25,274

The particulars of the pathological and biochemical investigations (excluding medico-legal work) were as follows :—

PATHOLOGICAL AND BIOCHEMICAL WORK CONDUCTED DURING  
THE YEAR 1939.

*Fractional Test Meals*

Specimens of Gastric Contents .. .. .. 270

*Urea (Estimation of)*

Urine .. .. .. .. .. 119

Blood .. .. .. .. .. 204

Cerebrospinal Fluid .. .. .. .. .. 1

Pus .. .. .. .. .. 1

*Glucose (Estimation of)*

Urine .. .. .. .. .. 13

Blood .. .. .. .. .. 229

*Blood*

Estimation of Hæmoglobin .. .. .. .. .. 319

R.B.C. Count .. .. .. .. .. 324

Leucocyte Count .. .. .. .. .. 316

Reticulocytes .. .. .. .. .. 101

Differential Leucocyte Count .. .. .. .. .. 327

Platelets .. .. .. .. .. 3

Grouping .. .. .. .. .. 139

Wintrobe's Volume Index .. .. .. .. .. 87

Icterus Index .. .. .. .. .. 84

Bleeding Time .. .. .. .. .. 1

Clotting Time .. .. .. .. .. 1

Sedimentation Rate .. .. .. .. .. 14

Estimation of Calcium .. .. .. .. .. 4

  ,, „ Cholesterol .. .. .. .. .. 3

  ,, „ Plasma Protein .. .. .. .. .. 2

  ,, „ Potassium .. .. .. .. .. 2

  ,, „ Creatinine .. .. .. .. .. 1

  ,, „ Chlorides .. .. .. .. .. 1

  ,, „ Laevulose .. .. .. .. .. 9

  ,, „ Phosphorus .. .. .. .. .. 4

  ,, „ Non-Protein Nitrogen .. .. .. .. .. 1

  ,, „ Uric Acid .. .. .. .. .. 1

Fragility of R.B.C.'s .. .. .. .. .. 4

Bendien Tests .. .. .. .. .. 7

Hæmolysin Tests .. .. .. .. .. 103

Paul Bunnell Tests .. .. .. .. .. 8

Van Den Bergh's Reaction .. .. .. .. .. 12

*Urine*

Diastase Content .. .. .. .. .. 3

Examination for Cystine .. .. .. .. .. 1

Creatinine Content .. .. .. .. .. 1

Acetone Bodies .. .. .. .. .. 3

Zondek-Aschheim Tests (Freidman's Modification) .. .. 10

*Faeces*

Quantitative Estimation of Fats .. .. .. .. .. 4

Examination of Renal Calculus .. .. .. .. .. 2

Pathological Sections .. .. .. .. .. 399

Total .. 3,138

The details of the Venereal Diseases tests are shown in the following table :—

EXAMINATIONS OF PATHOLOGICAL SPECIMENS CONDUCTED  
UNDER THE VENEREAL DISEASES SCHEME DURING THE  
YEAR 1939.

	For Detection of		For Wasser- mann Reaction	Sigma, Kahn & Laughlin Tests.	Other Exam- inations	Totals
	Spirochæta Pallida	Gonococci				
1st Quarter	—	305	2196	2278	790	5569
2nd Quarter	—	283	2212	2286	641	5422
3rd Quarter	—	322	2254	2100	527	5203
4th Quarter	1	299	1729	1898	367	4294
Totals ...	1	1209	8391	8562	2325	20488

The 2,325 "Other Examinations" consisted of :—

242 cerebrospinal fluids for cell count, protein estimation, and colloidal gold test ; 2,077 complement fixation tests for gonorrhœa ; the examination of 5 specimens of urine for gonococci, and the making of 1 culture for gonococci.

**CHEMICAL LABORATORY.**

Mr. E. V. Jones, the County Analyst, reports as follows :—  
The total number of samples analysed was made up as below :—

*For County.*

Food and Drugs Acts	..	..	..	..	..	2117
"Appeal to Cow" Samples	..	..	..	..	..	53
Fertilizers and Feeding Stuffs Act, 1926			..	..	..	11
Pharmacy and Poisons Act, 1933	..	..	..	..	..	2
Drinking Waters	..	..	..	..	..	379
Swimming Bath Waters (Full Analysis)			..	..	..	15
River Waters (Full Analysis)	..	..	..	..	..	128
River Waters (Partial Analysis)	..	..	..	..	..	50
Sewage Effluents (Full Analysis)	..	..	..	..	..	86
Sewage Effluents (Partial Analysis)	..	..	..	..	..	6
Crude Sewage (Full Analysis)	..	..	..	..	..	4
Coroner Samples	..	..	..	..	..	6
Miscellaneous Samples	..	..	..	..	..	48
						2905
<i>For Stoke-on-Trent</i>	..	..	..	..	..	945
<i>For Newcastle-under-Lyme</i>	..	..	..	..	..	55
						3905

## FOOD AND DRUGS ACTS.

Of the 2,117 samples submitted from the County area, 1,948 were found to be genuine and 169 adulterated or below standard.

(1) MILK.—Of 1,362 samples of undesignated milk, 148 were found to be unsatisfactory, of which 38 contained added water, 9 contained added water and were further deficient in fat, 22 were deficient in both fat and solids-not-fat, and 79 were deficient in fat.

One hundred and eighty-six samples of specially designated milks were examined, viz:— 20 “Tuberculin Tested”, 111 “Accredited” and 55 Pasteurised. Three were reported against, one of “Tuberculin Tested” containing added water and two of “Accredited” being deficient in fat.

The following samples were also examined:—56 of sterilized milk and one of vanilla flavoured milk. They were all found to be satisfactory except 4 samples of sterilized milk, 2 containing a little added water and 2 being deficient in fat.

*Action Taken.*—Forty-five of the 148 unsatisfactory samples of ordinary milk were informal and no direct action could be taken, but “follow up” samples were obtained where possible.

In 40 cases, representing 58 unsatisfactory samples (two or more having been taken simultaneously from the same purveyor in several instances), the adulterations were small and cautions were issued. Ten producers or retailers were prosecuted in respect of 18 samples containing added water, and 4 in respect of 6 samples deficient in fat.

The County Farm Institute, Rodbaston, was asked to give assistance in respect of 7 samples from two producers. In the remaining 14 instances no action was considered necessary.

The retailer of one formal sample of “Accredited” milk which was deficient in fat, was prosecuted and three cautions were issued in respect of formal samples of sterilized milk, two of which contained added water, the other being deficient in fat. The remaining unsatisfactory samples were informal.

In total, 43 retailers or producers were cautioned, and 15 were prosecuted. Fines amounting to £47, together with £35 7s. 0d. costs, were imposed.

The average composition of the milks of all grades was :—

	<i>On all samples.</i>	<i>On genuine samples.</i>
Fat .. ..	3.69	3.77
Solids-not-fat	8.80	8.84

Of 1,449 milks of all grades, passed as genuine, 92 were below the presumptive standard of 8.5 per cent. solids-not-fat, which deficiency was shown by the Freezing Point Depression (Hortvet) to be due to natural causes, and not to the addition of water.

(2) GENERAL ARTICLES OF FOOD.—Five hundred and twelve general articles of food and drugs were examined, and 14 (3 formal and 11 informal) were found to be adulterated or below standard, the County Analyst reporting as follows :—

*Foaming Ale Ingredients.*—The only sample (informal) submitted, consisting of Malt, Hops, Kola Nuts, Liquorice and Dandelion, was alive with Mites, Spiders and Book Lice.

*Ginger, Ground.*—Of nine samples submitted, *one* (informal) did not come up to the standard of the British Pharmacopœia. It was 16 per cent. deficient in water soluble extractive, and 22 per cent. deficient in alcohol soluble extractive, containing only 8.4 per cent. and 3.51 per cent., against 10 and 4.5, respectively.

*Jam, Raspberry (Full Fruit Standard).*—Of eight samples submitted, *four* (informal) were deficient in Fruit Content, containing only 30, 36.6, 33.8 and 29 per cent., instead of a minimum of 38 per cent., according to the Food Manufacturers' Federation Standard.

*Lard, Cooking.*—The only sample (formal) submitted was entirely devoid of lard. It consisted of 88.3 per cent. of vegetable fat, with 11.7 per cent. of water.

*Milk Pudding, Tapioca.*—The only sample (informal) submitted contained living Acari.

*Polony.*—Of three samples submitted, *two* (1 formal and 1 informal) contained preservative, viz :—186 and 218 parts per million of Sulphur Dioxide.

*Sausage.*—Of 10 samples submitted, 4 (1 formal and 3 informal) were preserved sausage, containing 45, 101, 282 and 38 parts per million of Sulphur Dioxide, respectively.

It was very satisfactory to find that no preservative, other than those permissible, was found in any sample submitted this year.

*Action taken.*—Cautions were issued in respect of the 3 official samples, one each of Cooking Lard, Sausage and Polony.

The Medical Officer of Health of the district concerned was informed of the result of the examinations of the Foaming Ale Ingredients and the Milk Pudding Mixture.

#### “APPEAL TO COW” SAMPLES.

Of 53 samples, 21 were below the presumptive standard of which 7 were below in fat, and 14 in solids-not-fat.

#### FERTILIZERS AND FEEDING STUFFS ACT, 1926.

Of the 11 samples examined, 6 were unsatisfactory, as follows:—

Decorticated I.P. Cotton Flakes .. ..	1
Ground Nut Cake Flakes .. ..	1
Ground Earth Nut Meal .. ..	2
“B” Pig Meal .. ..	2

#### DRINKING WATERS.

Of 379 samples, 239 were of satisfactory quality; 49 showed sewage pollution; 19 were organically impure; 41 were of doubtful quality; 3 contained metallic contamination; 7 were excessively hard; 9 contained both animal and vegetable pollution; 8 contained sewage and metallic contamination and 4 contained vegetable and metallic contamination.

#### CORONER SAMPLES.

Two cases were sent to this Laboratory, consisting of 6 specimens as follows:—

Case 1.—Five specimens were submitted, all of which were examined for volatile, metallic, alkaloidal and other poisons.

Case 2.—Only one sample of blood was submitted, which was simply examined for the presence of Carbon Monoxide, and the amount determined.

## MILK SUPPLY.

As mentioned in my Report for last year, the Agricultural Act, 1937, which came into operation on the 1st April, 1938, did not affect the duties of the County Council under the Milk (Special Designations) Order, 1936, and the subsequent Order of 1938, in connection with the issue of "Tuberculin Tested" and "Accredited" licenses, with the consequent inspections of premises, taking of milk samples, etc. The field work thus entailed was assigned to the Sanitary Inspectors and Milk Sampling Staff of the Public Health Department, which were adequately increased for the purpose, and normally now consist of a Chief Sanitary Inspector, three Assistant Inspectors and four Milk Sampling Officers. For other County purposes the whole time of two Sanitary Inspectors is necessary, but the inspection of farm buildings, and other duties in connection with the herds, except routine milk sampling, were spread over the whole staff, two of whom were placed out on districts. The routine sampling of milk at the farms, together with the collection of street samples, etc., is undertaken by the Milk Sampling Officers. This arrangement continued smoothly until the outbreak of war, when the staffs became depleted by the loss of two Sanitary Inspectors and one Sampling Officer, who have not been replaced. In consequence the work has had to be curtailed, but every effort is being made to ensure that efficient supervision is maintained.

In the following section of the Report are details of the work during 1939.

### STREET SAMPLING.

In the following tables the numbers of samples of ordinary and specially designated milks taken during the year by the Official Sampling Officers of the County Council are shown, together with the results of the bacteriological and biological tests carried out in the County Laboratory. In the table of ordinary milk the numbers of samples taken in the various Sanitary Districts of the County are indicated.

The area now covered for this purpose is the whole of the Administrative County with the exception of the Municipal Boroughs of Newcastle and Rowley Regis and the Urban District of Brierley Hill, the Councils of the two latter districts becoming Food and Drugs Authorities on the 1st October, 1939.

## ORDINARY MILK SAMPLES.

1ST JANUARY TO 31ST DECEMBER, 1939.

Sanitary District	No. of samples Submitted	Result of Examination		T.B.	
		Cleanliness.			
		Satisfactory	Unsatisfactory		
<b>URBAN :</b>					
Aldridge ..	*40	26	12	1	
Biddulph ..	74	52	22	3	
Bilston ..	12	6	6	4	
† Brierley Hill ..	27	17	10	1	
Brownhills ..	*48	26	20	2	
Cannock ..	85	69	16	16	
Coseley ..	15	6	9	2	
Darlaston ..	21	16	5	1	
Kidsgrove ..	75	51	24	5	
Leek ..	60	40	20	3	
Lichfield ..	*33	15	17	—	
† Rowley Regis ..	14	9	5	3	
Rugeley ..	*30	21	8	2	
Sedgley ..	55	36	19	4	
Stafford ..	78	62	16	5	
Stone ..	31	25	6	5	
Tamworth ..	38	33	5	3	
Tettenhall ..	20	14	6	—	
Uttoxeter ..	40	29	11	1	
Wednesbury ..	14	7	7	2	
Wednesfield ..	22	13	9	2	
Willenhall ..	49	24	25	2	
<b>RURAL :</b>					
Cannock ..	94	63	31	3	
Cheadle ..	184	123	61	9	
Leek ..	60	40	20	—	
Lichfield ..	*96	62	33	4	
Newcastle ..	84	70	14	3	
Seisdon ..	*77	54	21	3	
Stafford ..	*34	26	7	2	
Stone ..	42	32	10	4	
Tutbury ..	36	25	11	3	
Uttoxeter ..	13	8	5	1	
<b>Totals ..</b>	<b>*1,601</b>	<b>1,100</b>	<b>491</b>	<b>99</b>	

\* All samples were not examined bacteriologically.

† To 30.9.39 only. Local Councils became appropriate Authorities from 1.10.39.

## SPECIALLY DESIGNATED MILK.

1ST JANUARY TO 31ST DECEMBER, 1939.

Designation	No. of Samples Submitted	Result of Examination		T.B.	
		Cleanliness.			
		Satisfactory	Unsatisfactory		
“Tuberculin Tested” ..	70	63	7	—	
“Accredited” ..	185	168	17	8	
Pasteurised ..	96	92	4	—	
“Tuberculin Tested” Pasteurised	5	5	—	—	
<b>Totals</b>	<b>356</b>	<b>328</b>	<b>28</b>	<b>8</b>	

In addition, ten samples of sterilized milk were taken for examination, and were all satisfactory.

### (i) BACTERIOLOGICAL EXAMINATION.

*Undesignated Milk.*—Of the 1,601 samples, 1,591 were bacteriologically examined, and 1,100 were found to conform to a certain standard of cleanliness, the remaining 491 failing to do so. Four hundred and sixty-eight of the latter were produced within the County and 23 outside. The percentage of samples reported clean was 69.1, compared with 56.4 last year. In addition to being unsatisfactory from a cleanliness standpoint, 21 also contained tubercle bacilli.

As in previous years, the names of the producers of the unsatisfactory milks were reported to the County Farm Institute, and the farmers concerned were communicated with by the Assistant Director for Agricultural Education, and offered every assistance. In accordance with the usual practice, if no improvement in the cleanliness of the milk resulted, the District Council in whose area the premises are situated was informed, so that the necessary steps could be taken under the Milk and Dairies Order, 1926.

*Specially Designated Milks.*—The cleanliness test was applied to the 356 samples submitted, and 28, or 7.9 per cent., were found to be unsatisfactory, viz. : 7 “Tuberculin Tested,” 17 “Accredited” and 4 Pasteurised, as compared with 10 per cent. in the previous year.

In addition to examination by the bacterial count method, the Pasteurised milks are submitted to the phosphatase test,

which indicates the efficiency or otherwise of the pasteurisation. In this respect the 101 samples obtained in 1939 were satisfactory.

As regards the unsatisfactory samples, other than those of Pasteurised and Sterilized Milks, 15 were produced in the County and 9 outside. The sources of production of the 4 Pasteurised samples were not known, but they were all treated at premises outside the County.

#### (ii) BIOLOGICAL EXAMINATION.

Of the 1,601 samples of ordinary milk, and the 356 of specially designated milks, 1,593 and 354, respectively, were examined biologically. Ninety-nine samples of ordinary milk, and 8 of "Accredited" were found to contain tubercle bacilli, 91 and 6, respectively, being produced within the County.

Where the milk was produced in Staffordshire the positive results were reported to the Divisional Inspector of the Ministry of Agriculture and Fisheries, who is now responsible for the consequent veterinary examinations of the herds concerned.

The procedure adopted when the sources of production of samples containing tubercle bacilli are outside the County is dealt with in a succeeding paragraph.

#### MILK IN SCHOOLS SCHEME.

At the end of the year there were 98 suppliers of designated and undesignated milks to schools or departments, as detailed in the following table:—

	No. of Suppliers.	Schools or Depts. supplied.	Children supplied. (Dec.)
"Tuberculin Tested"	..	1	1 8
"Accredited"	..	75	9,950
Pasteurised ..	..	18	200 19,880
Undesignated	..	4	5 57
	—	—	—
	98	360	29,895
	—	—	—

The procedure decided upon in previous years was continued, viz., the sampling of the supplies at least once each term *after* delivery to the schools. The samples are examined bacteriologically and biologically, and, in the case of Pasteurised milk, by the phosphatase test in addition.

All herds producing milk are, of course, under supervision by the Veterinary Staff of the Ministry of Agriculture and Fisheries, but, in the case of undesignated production, examinations are

normally made less frequently. However, as far as school milk is concerned, the Divisional Inspector agreed to deal with the matter adequately, so that the supplies, which are in districts where it is difficult to obtain designated milk, can continue.

The number of samples collected at schools during the year was 252, and of these 59 failed to conform with the required standard of cleanliness. When an unsatisfactory result is obtained notification is made to the supplier and/or producer, and repeat samples are taken.

Forty-nine samples from Pasteurised supplies were submitted to the phosphatase test ; 48 passed and 1 failed.

As regards the biological examination of samples, where tubercle bacilli are found the school supply is cancelled immediately and is not resumed from the particular source until the herd is free from infection. In the meantime, where possible alternative arrangements are made so that the scheme is not interfered with. The number of tuberculous samples during the year was 14 and the procedure mentioned in a preceding paragraph was adopted.

#### FOOD AND DRUGS ACT, 1938 (LATE MILK AND DAIRIES (CONSOLIDATION ACT, 1915—SECTION 4).

In 1939, 97 representations in respect of milk produced in Staffordshire, which was found to contain tubercle bacilli, were made by Medical Officers of Health of districts outside the area administered by the County Council. Similarly, 17 complaints were made to outside Authorities in respect of milk sent into this County for sale. In this respect the County and County Borough Public Health Departments act in the capacity of clearing houses only, and the appropriate action regarding the herds is taken by the Veterinary Staff of the Ministry of Agriculture and Fisheries.

#### MILK (SPECIAL DESIGNATIONS) ORDER, 1936.

*“Accredited.”*—On the 31st December, 1939, there were 2,700 farmers licensed to produce “Accredited” milk, as compared with 2,635 at the end of the previous year. During the period under review, 14,115 samples of milk were taken for examination for cleanliness, and 11,027, or 78.1 per cent., complied with the required standard.

During the first months of 1939 endeavours were made to obtain routine samples at the rate of six each year, but later, in view of the depletion of staff, this had to be abandoned, and for the time being efforts will be made to pay quarterly visits to the farms for this purpose.

Sixty-five applications for new licenses were received and dealt with during the year.

When it is found that the main conditions attached to a licence, which include, of course, a good sample record, are not being observed, every effort is made to obtain a satisfactory solution, and failing this the case is dealt with by the appropriate Committee. During 1939 the licences of 39 producers were suspended for one month, 32 were revoked and 4 cautions were issued.

*“Tuberculin Tested.”*—At the end of the year the number of licences in force for the production of “Tuberculin Tested” milk was 37, as against 35 at the close of 1938.

The routine samples are examined biologically as well as for cleanliness. Of 163 obtained during the year, 20 failed to comply with the required bacteriological standard and 2 were found to contain tubercle bacilli.

#### GENERAL.

Apart from the foregoing, there is one further activity which is worthy of mention. Since 1934, a scheme similar to that for schools has been in operation in connection with the supervision of milk supplies to two Children’s Hospitals, and in 1937 it was extended to include all the Sanatoria and Public Assistance Institutions, together with an Infirmary. The samples are examined bacteriologically and biologically, and of 8 taken during 1939, 4 failed to pass the required standard for cleanliness. One sample was found to contain tubercle bacilli.

### **WATER SUPPLIES AND RIVERS POLLUTION PREVENTION.**

In former years full comments, including extracts from the Annual Reports of the District Medical Officers of Health have been made. This year, however, developments of especial interest only are given as follows :—

#### **Water Supplies :—**

STAFFORD M.B.—The boring operations and new works are now completed, from which a satisfactory water supply is being obtained.

CHEADLE R.D.—Several water main extensions have been undertaken during the year. The village of Calton has now been provided with a piped supply.

LEEK R.D.—A piped supply is being provided for Longnor, and will be completed in 1940.

STAFFORD R.D.—It is regretted that the Rural District Council have considered it necessary to suspend the work on their new

water works for the Western Area, and it is hoped that operations will be renewed as soon as circumstances permit.

UTTOXETER R.D.—The scheme to provide a piped supply for the *Parish of Leigh* was commenced during the year, and will soon be available for the more populous parts of the Parish.

A scheme to provide a piped supply to the *Parish of Newborough* was considered and approved, work on which has now been commenced, and a supply will probably be available in the latter part of 1940.

### Rivers Pollution Prevention :—

#### RIVER MERSEY WATERSHED.

KIDSGROVE U.D.—*Talke Ward*.—The sewerage scheme for this area is now completed, but unfortunately the extensions to the Sewage Disposal Works have not been commenced.

#### RIVER TRENT WATERSHED.

CHEADLE R.D.—The sewerage and sewage disposal scheme for Cheddleton and district is now completed. The new works are functioning satisfactorily, and the smaller works have been dispensed with.

STONE U.D.—Work on the new sewerage and sewage disposal scheme was commenced during the year, and although progress is being continued, it is somewhat retarded owing to the present difficulties.

BROWNHILLS U.D.—*Norton Canes*.—The new sewerage and sewage disposal works for this area were completed during the year, and the condition of the stream concerned has thereby considerably improved.

TUTBURY R.D.—The sewerage of the Parishes of Outwoods, Stretton and Branston, was completed during the year, and a large proportion of houses in these areas have now been connected to the new sewers.

#### RIVER TAME WATERSHED.

WALSALL C.B.—*Bescot Sewage Works*.—The extensions to these works were completed in the early part of the year, and are working very effectively.

WILLENHALL U.D.—Further progress was made on the new Short Heath trunk sewer, and when this is completed, probably in 1940, the second of the two small works will be dispensed with.

COSELEY U.D.—The extensions to the sewage disposal works were completed during the year, and are now functioning satisfactorily.

TAMWORTH.—*Joint Sewage Board.*—The defective distributors at the sewage works have been dispensed with, and a type of more recent design provided. These have had the effect of improved distribution to the filters, and improvement in the effluents therefrom.

### RIVER SEVERN WATERSHED.

SEISDON R.D.—*Aldersley.*—The sewerage scheme for this area has now been completed, and the small works which have so long been a source of pollution have been dispensed with.

*Wombourn.*—The new sewerage and sewage disposal scheme, was completed in the early part of the year, and the works are functioning very effectively.

*Kinver.*—Work on the new sewerage and sewage disposal scheme continued throughout the year, but unfortunately progress has been retarded owing to present difficulties.

BRIERLEY HILL U.D.—The improvements at the Round Hill Sewage Farm, and on the new storm water storage tanks at Heathbrook and Wordsley Pumping Stations were completed during the year.

### MINISTRY OF HEALTH INQUIRIES.

The following Inquiries were held by the Ministry of Health during the year 1939, into applications for loans in respect of schemes of sewage disposal and water supply.

District.	Date of Inquiry.	Amount of loan. £	Purpose.
Leek U.D. . .	6.1.39	3,434	Water Supply.
Brownhills U.D. . .	9.8.39	3,338	Sewage Disposal.

### CONTRIBUTIONS TO DISTRICT COUNCILS FOR WATER AND SEWAGE DISPOSAL SCHEMES.

In the Report for 1930, the principles governing contributions from the County Council were fully stated and a brief summary has appeared in subsequent Reports.

Contributions continue to be payable in respect of all schemes mentioned in previous Reports, and during 1939 applications in

respect of 6 new schemes, all for sewerage and sewage disposal were considered and contributions promised, viz. :—

Sanitary District.	Scheme.
Aldridge U.D. . . . .	Mill Green.
Darlaston U.D. . . . .	Bentley.
Lichfield City . . . . .	Curborough.
Rugeley U.D. . . . .	Leathermill Lane.
Stone U.D. . . . .	Stone (including 4 houses in Stone R.D.)
Newcastle R.D. . . . .	Baldwin's Gate (Parts of Parishes of Chorlton, Madeley and Whitmore.)

In addition to the above, one case arose during the year in which a Local Authority made application in respect of a small scheme, the whole capital cost of which was to be met from current revenue. In the circumstances the County Council agreed to the payment of a lump sum contribution towards the capital cost. The details are as follows :—

Lichfield R.D. . . . .	Wall—Sewage Disposal Tank.
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In two other instances further consideration was given during the year to applications affecting grants previously approved, as follows :—

*Water Supplies :—*

Lichfield R.D. . . . .	Harlaston, Hoghill portion. —Previously considered 3.10.36. Revised upon increase in the estimated income from consumers. Contribution reduced.
Uttoxeter R.D. . . . .	Leigh.—Previously considered in November, 1937. Capital cost of scheme reduced and contribution accordingly reduced.

**HOUSING (RURAL WORKERS) ACTS.**

Under these Acts contributions are given by the County Council for the re-conditioning of old houses in rural areas, and for the conversion into dwellings of buildings not previously used for that purpose. Applications for grants must come from the owner of the property concerned. During the year, 14 applications were received in respect of 22 houses. Two representing two houses,

were refused, and in the remaining 12 instances, affecting 20 houses, grants were offered, as follows :—

<i>District.</i>	<i>Parish.</i>	<i>No. of houses.</i>	<i>Amount of Grant.</i>
			£
Stafford M.B.	Stafford	1	85
Cannock R.D.	Coppenhall	1	100
Lichfield R.D.	Wigginton	2	200
	ditto.	3	300
Newcastle R.D.	Audley Rural	2	175
Seisdon R.D.	Bobbington	2	200
Stafford R.D.	Adbaston	1	100
	Gnosall	1	100
	Tixall	2	200
Stone R.D.	Eccleshall	1	100
Tutbury R.D.	Anslow	3	300
Uttoxeter R.D.	Marchington	1	100

## PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASE.

As mentioned in previous years, the Minister of Health approved a scheme under Section 63 of the Local Government Act, 1929, by which the Isolation Hospital Services in the County, apart from those for Smallpox, will be provided in six areas.

The following Joint Hospital Boards, which were in existence when the scheme was submitted, continue to function and provide for the districts mentioned :—

Congleton and District	..	Biddulph U.D.
Stone	..	Stone U.D. and R.D.
Tamworth	..	Tamworth M.B.

The remainder of the Administrative County was divided into three areas and the Minister of Health has made the appropriate Orders, the appointed days being as follows :—

Newcastle-under-Lyme Joint Hospital Board	..	1.10.38
Mid-Staffordshire Joint Hospital Board	..	1.10.38
South Staffordshire Joint Hospital Board	..	1.4.39

The Newcastle-under-Lyme Joint Board is functioning with existing hospitals. In the Central and Southern Areas, however, proposals to build adequate hospitals have, of necessity, had to be postponed for the time being, and the arrangements for isolation which previously existed have to suffice.

SMALLPOX.—No case of Smallpox was recorded in 1939, a similar experience to that of last year. The last case recorded in the County was in 1930.

**SCARLET FEVER.**—The incidence of this disease in the County was slightly greater than that for the previous year. There were 1,927 notifications as against 1,881 last year, 1,518 in Urban Districts and 409 in Rural Districts. Five deaths occurred in Urban Districts, but none in Rural Districts. The case rate per thousand of the population is 2.52 compared with 1.89 for England and Wales as a whole. The death-rate in the Urban Districts is 0.01. The prevailing type of the disease was mild.

**DIPHTHERIA.**—Fewer cases were notified in 1939 than in the previous year, the numbers being 931 as against 1,215. The decrease was mainly in the Urban Districts where there were 702 cases compared with 1,021 in 1938. Two hundred and twenty-nine cases were notified in Rural Districts as against 194 in the previous year. The case rate was 1.22 compared with 1.14 for England and Wales. Thirty-seven deaths occurred in Urban Districts with a death-rate of 0.06 per thousand of the population. Eighteen died in Rural Districts which yields a death-rate of 0.10. On reference to the tables at the end of the Report the numbers and death-rates for each Sanitary District will be found. The prevailing form of diphtheria, although more severe than scarlet fever, was mild. Cases were notified in each of the 35 Sanitary Districts.

By arrangement with the District Medical Officers of Health, the Assistant Medical Officers carried out Schick testing and immunization in children attending schools in the Aldridge, Amblecote, Biddulph, Brownhills, Darlaston, Lichfield, Rugeley, Stafford, Tamworth, Uttoxeter, Wednesfield and Willenhall Urban Districts, and the Leek, Lichfield, Seisdon, Stafford, Stone, Tutbury and Uttoxeter Rural Districts, the work undertaken being a continuation of that commenced in previous years.

Full advantage has been taken of the facilities afforded at the County Laboratory for bacteriological investigations, and 29,518 specimens were sent by medical practitioners, compared with 28,407 in the previous year. These included 190 virulence tests undertaken in special cases, and 5,385 tests in connection with a special investigation.

**ENTERIC FEVER.**—Thirteen notifications of typhoid fever in Urban Districts and one in a Rural District were received during the year, compared with the total of 7 in 1938. There was one death in an Urban District from this cause. The case rate was 0.02 compared with 0.04 for England and Wales. On reference to the tables at the end of the Report, the areas in which these cases occurred will be seen.

ENCEPHALITIS LETHARGICA.—One case only was notified during 1939, but eight deaths were reported, and the districts in which they occurred will be found in the tables at the end of the Report.

DYSENTERY.—During the year 26 cases of dysentery were notified. They occurred in the following districts :—Aldridge U.D. 8 ; Bilston M.B. 1 ; Coseley U.D. 3 ; Stafford M.B. 12 ; Cannock R.D. 1 ; Stone R.D. 1.

CEREBRO-SPINAL FEVER.—During the year 28 cases were notified, 21 in Urban Districts and 7 in Rural Districts. In no instance did these cases constitute an epidemic. The number of deaths from cerebro-spinal fever registered during the year is 6.

Thirty specimens of cerebro-spinal fluid were examined in the County Bacteriological Laboratory. In addition, 108 swabs were examined and typing was undertaken when possible. In various areas throughout the County the services of Consultants are at the disposal of General Practitioners, and special arrangements have been made for the cerebro-spinal fluid to be sent to the Laboratory in a portable incubator, because these organisms do not survive if sent through the post in the ordinary way.

With reference to non-notifiable infectious diseases, the deaths from measles, whooping cough, diarrhoea and enteritis are as follows :—

MEASLES.—There were 26 deaths in Urban Districts with a death-rate of 0.05, and 2 deaths in Rural Districts with a death-rate of 0.01. As the disease is not notifiable the number of cases is unknown, but from the returns sent in by Head Teachers of Elementary Schools, I find that a total of 4,257 cases of measles and 50 cases of German measles occurred in children of school age.

At the same time, it must be pointed out that the cases so reported relate only to the County Elementary Education Area, having an estimated population of 485,670 out of 763,400 for the Administrative County, and consequently there must have been many more cases.

WHOOPING COUGH.—In 1939 there were 20 deaths in Urban Districts with a death-rate of 0.03 and 6 deaths in Rural Districts with a death-rate of 0.03. The deaths occurred in 12 of the 25 Urban Districts ; only 3 of the 10 Rural Districts were affected. The school teachers in the County Elementary Education Area reported 777 cases in children of school age, but the disease specially

attacks children during infancy, and is more fatal at that period of life. As the disease is not notifiable we have no accurate knowledge of its incidence.

**DIARRHŒA AND ENTERITIS.**—Forty-eight deaths occurred in Urban Districts, and 9 in Rural Districts, the death rates being 4.6 and 3.0 respectively per thousand live births, in children under 2 years of age. The cases occurred in 18 of the Urban Districts and in 6 of the Rural Districts.

**INFLUENZA.**—In 1939 there were 123 deaths in Urban and 43 in Rural Districts, as compared with 115 and 27, respectively, during the previous year.

The number of cases of Notifiable Infectious Diseases, with the deaths, in the Administrative County during 1939 are as follows:—

Diseases	Notifications		Deaths	
	Urban	Rural	Urban	Rural
Small-pox	...	...	—	—
Scarlet Fever	...	...	1,518	409
Diphtheria	...	...	702	229
Enteric Fever	...	...	13	1
Puerperal Pyrexia	...	...	95	39
Erysipelas	...	...	217	64
Cerebro-Spinal Fever	...	...	21	7
Poliomyelitis	...	...	2	4
Pneumonia	...	...	749	208
Encephalitis Lethargica	...	...	1	—
Dysentery	...	...	24	2

\* Not classified in Registrar-General's Return.

## VACCINATION.

The ineffectiveness of the working of the Vaccination Acts is shown on examination of the Returns of the various Vaccination Officers for the year 1st January to 31st December, 1938, where it is seen that out of 10,983 children born during the year in whom vaccination was possible, only 24.4 per cent. were subsequently protected against smallpox.

## TUBERCULOSIS.

The treatment scheme is administered by the Staffordshire, Wolverhampton and Dudley Joint Board for Tuberculosis, whose Annual Report deals extensively with all aspects of the work.

As I have often stressed, the Joint Board is not concerned with the important question of prevention, which is a duty of the District Councils, adequate housing being the main consideration. The usual investigation of environmental conditions in the Joint Board's area revealed that in 1939 42.1 per cent. of the patients had a separate bedroom. This percentage is slowly increasing, and in 1928 the corresponding figure was 25.1. In abnormal times, such as are now being experienced, the difficulties of the District Councils are fully appreciated, but nevertheless, it is of great importance that whenever possible steps should be taken to reduce the danger of infection.

Given below are the 1939 statistics for the Administrative County.

The following table shows new cases of tuberculosis, including primary notifications and cases which came to notice otherwise than by formal notification, and deaths from the disease, classified according to ages and sex:—

AGE PERIODS	NEW CASES				DEATHS			
	Pulmonary		Non- Pulmonary		Pulmonary		Non- Pulmonary	
	M.	F.	M.	F.	M.	F.	M.	F.
0— ...	1	1	3	3	1	—	5	3
1— ...	6	2	23	20	1	—	10	9
5— ...	5	8	23	23	3	4	6	4
10— ...	10	10	16	12	3	4	6	4
15— ...	55	41	14	8	42	53	5	3
20— ...	62	66	7	6	40	31	6	5
25— ...	86	78	7	11	45	25	6	2
35— ...	56	33	4	4	41	14	3	1
45— ...	51	12	3	1	41	11	4	1
55— ...	40	6	1	—	12	4	—	2
65 and upwards	8	—	2	2	—	—	—	—
Totals	380	257	103	90	226	142	45	30

Three hundred and sixty-eight persons died from pulmonary tuberculosis and 75 from other forms of tuberculosis, the death rates being 0.48 and 0.10 per thousand of the population, respectively. In the general tables at the end of the Report the rates for each Sanitary District will be found.

As regards the preceding table, particular attention is called to the age groups of the sexes in which death occurred.

The table which follows shows the death rates in the Urban and Rural Districts of the County from 1914 :—

Year	Death Rate per 1,000 of the Population			
	Phthisis		Other forms of Tuberculosis	
	Urban	Rural	Urban	Rural
1914	0.89	0.54	0.31	0.20
1915	0.94	0.67	0.34	0.29
1916	1.01	0.80	0.40	0.29
1917	1.01	0.74	0.34	0.31
1918	1.03	0.88	0.31	0.28
1919	0.83	0.61	0.22	0.30
1920	0.75	0.56	0.30	0.21
1921	0.80	0.53	0.23	0.21
1922	0.80	0.55	0.24	0.17
1923	0.75	0.58	0.25	0.22
1924	0.73	0.58	0.22	0.20
1925	0.83	0.49	0.22	0.14
1926	0.74	0.50	0.22	0.11
1927	0.73	0.44	0.21	0.22
1928	0.64	0.48	0.14	0.13
1929	0.76	0.54	0.15	0.12
1930	0.72	0.54	0.15	0.13
1931	0.78	0.52	0.17	0.13
1932	0.64	0.42	0.16	0.14
1933	0.72	0.50	0.14	0.08
1934	0.67	0.43	0.11	0.16
1935	0.67	0.35	0.13	0.08
1936	0.53	0.34	0.11	0.08
1937	0.60	0.41	0.13	0.11
1938	0.56	0.29	0.13	0.11
1939	0.52	0.35	0.09	0.11

#### NOTIFICATION.

The following are particulars of the primary notifications made from 1914 :—

1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
1399	1233	1048	873	856	699	642	929	971	1029	974	1232	1400
1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
1106	1194	1017	1021	1129	1074	1011	929	825	831	858	789	726

In addition to the 726 notifications in 1939, there were 104 cases, against 88 in the previous year, which came to knowledge from other sources, 69 of which were transfers from other areas. It was found that 26 unnotified cases had died and in 7 further instances notification was made after death. These 33 deaths give a ratio of 1 in 13.4 of the total deaths; roughly, 13 out of 14 deaths were of cases notified under the Regulations before decease.

The total notifications are classified in a preceding table and here again the incidence in the sexes and age groups should be specially observed.

Speaking generally, the duty of notification in the County area is satisfactorily performed, for it will be realised that total notification cannot be expected.

#### REGISTERS OF DISTRICT MEDICAL OFFICERS.

At the end of the year the following cases were included in these registers :—

TOTAL CASES	PULMONARY			NON-PULMONARY		
	M.	F.	Total	M.	F.	Total
6,653	2,341	2,142	4,483	1,156	1,014	2,170

This indicates that there is one case of tuberculosis in every 115 persons, or 8.7 per 1,000 of the population. It is also shown that approximately one death occurred amongst 15 cases in the year, which compares favourably with the expert opinion that for every death there are at least 10 persons suffering from the disease.

## CANCER.

In the following table, the deaths from Cancer during 1939, in age and sex groups, in the Urban and Rural Districts of the County, are shown :—

Age Groups	Urban Districts			Rural Districts			Grand Total
	Male	Female	Total	Male	Female	Total	
0- ...	—	—	—	—	—	—	—
1- ...	—	—	—	1	—	1	1
2- ...	—	2	2	—	—	—	2
5- ...	2	—	2	—	1	1	3
15- ...	3	1	4	—	1	1	5
25- ...	4	7	11	—	1	1	12
35- ...	12	21	33	10	12	22	55
45- ...	42	60	102	12	17	29	131
55- ...	124	114	238	22	34	56	294
65- ...	140	123	263	42	46	88	351
75- ...	70	66	136	20	36	56	192
Totals...	397	394	791	107	148	255	1,046

From a table which appears in the section of the Report dealing with deaths, the increase in recent years in deaths from this cause is apparent, the thousand mark being passed in 1938. The increase is not altogether unexpected, for the liability to cancer is enhanced as age advances and people now live longer than they did a generation ago.

## VENEREAL DISEASES.

Under the County Council scheme for the treatment of Venereal Diseases, agreements have been made with the North Staffordshire Royal Infirmary, Stoke-on-Trent ; the Staffordshire General Infirmary, Stafford ; the Royal Hospital, Wolverhampton ; the Guest Hospital, Dudley ; the Corbett Hospital, Amblecote ; and the Walsall Corporation for the establishment of special clinics. A special arrangement also exists for the treatment of County cases at the Birmingham General Hospital, and early in 1939, an agreement was entered into with the Children's Hospital, Ladywood Road, Birmingham.

There is one whole-time Venereal Diseases Officer on the staff of the County Council who is responsible for the Clinics at Stafford and Stoke-on-Trent mentioned above.

Last year, 782 Staffordshire cases were treated, and the following table gives detailed information for 1939, including cases from the County who attended Clinics outside the area :—

CLINIC.	Syphilis	Soft chancre	Gonorrhœa	Non-Venereal	Total	Attendances.
Birmingham General Hospital ...	10	—	16	32	58	1541
Burton-on-Trent Gen. Infirmary	1	—	4	—	5	65
Derby Royal Infirmary ...	—	—	2	4	6	167
Dudley Guest Hospital ...	5	1	30	35	71	2506
Stafford (Staffordshire General Infirmary) ... ...	12	—	29	31	72	1804
Stoke-on-Trent (North Staffordshire Royal Infirmary) ...	40	2	69	84	195	9104
Stoke-on-Trent (Municipal Clinic, Shelton) ... ...	1	—	25	6	32	1453
Stourbridge (Corbett Hospital)	7	1	8	4	20	939
Walsall (Manor Hospital) ...	9	—	30	14	53	1945
Wolverhampton Royal Hospital	31	1	70	100	202	5741
 Totals ... ... ...	116	5	283	310	714	25265

Free supplies of Salvarsan or its substitutes are issued to General Practitioners, who comply with the necessary requirements, for the treatment of Staffordshire cases in their practices. At the end of 1939 the names of 40 doctors appeared on the approved list, 8 of whom took advantage of the provision during the year.

The County Council have arrangements for the admission of patients from the Administrative County to Cleveland House, Wolverhampton, an institution for the reception of expectant mothers suffering from venereal disease. In 1939, eleven such patients were treated, nine of whom were admitted during the year.

W. D. CARRUTHERS,

County Medical Officer of Health.

December, 1940.



Table showing Population, Number of Persons per Acre, Birth and Death-rates as well as the Death-rates at all ages and among Children under 1 year, and the Death-rates from Zymotic Diseases, Tuberculosis, Diseases of the Respiratory Organs etc.

DISTRICT	Population at all ages			Zymotic Mortality												Crude death-rate per 1,000 of Population			
	Census 1931 of areas as constituted after changes in Boundary	Estimated to middle of 1939		Number of Persons per acre	Per 1,000 of Population			Per 1,000 of Population			Per 1,000 of Population			Per 1,000 of Population			Crude death-rate per 1,000 of Population		
		For Birth Rates	For Death Rates		Live Birth-rate per 1,000 of Population	Still-births Rate per 1,000 of Population	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Mortality in children under one year per 1,000 registered live births	Per 1,000 live Births	Tuberculosis of Respiratory System	Diarrhoea (under 2 years)	Small-pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Typhoid and Paratyphoid Fevers	
Aldridge	14,446	20,420	20,850	2.2	20.4	0.48	8.9	10.1	58	—	—	—	0.05	—	—	—	—	—	—
Ambleside	3,099	2,836	2,835	4.3	11.3	0.35	12.7	12.3	—	—	—	—	—	—	—	—	—	—	—
Biddulph	8,990	9,847	9,876	1.5	19.1	0.51	10.9	12.3	37	0.10	0.10	0.20	0.20	—	10.6	0.51	1.62	0.20	0.61
Bilston	31,321	31,600	31,460	16.8	19.1	0.60	11.5	14.0	66	—	0.03	—	—	6.6	0.57	0.10	1.43	0.51	0.70
Brierley Hill	44,671	47,040	46,530	7.9	17.2	0.57	10.9	12.0	51	—	—	0.04	0.09	1.2	0.60	0.06	1.16	0.39	0.58
Brownhills	18,368	19,790	19,760	3.1	19.9	0.86	10.8	12.5	41	—	—	0.05	0.05	—	0.30	0.10	1.32	0.20	0.56
Cannock	35,300	37,090	37,050	4.5	17.3	0.59	11.4	12.7	63	—	0.05	—	0.38	7.7	0.22	0.11	1.13	0.24	0.81
Coseley	25,137	29,640	29,740	9.0	22.4	0.74	11.1	12.9	57	—	—	0.03	0.03	7.5	0.71	0.07	1.65	0.47	0.81
Darlaston	20,053	20,220	20,250	13.2	19.8	0.59	11.5	14.3	62	—	0.15	—	0.05	0.15	7.5	0.79	0.15	1.43	0.30
Kids Grove	14,940	14,590	14,490	3.5	15.6	0.96	11.5	13.2	66	—	—	0.07	—	8.8	0.35	0.07	1.59	0.41	0.21
Leek	19,442	19,030	19,350	4.5	11.9	0.74	13.1	13.6	57	—	0.10	—	0.05	—	0.52	0.16	1.65	0.31	0.26
Lichfield	8,574	8,697	8,814	2.5	17.6	0.46	12.3	10.7	45	—	0.11	—	—	0.45	0.11	1.93	0.11	0.23	0.45
Newcastle	54,739	64,460	64,420	7.3	16.4	0.98	10.8	12.1	52	—	0.02	0.02	0.05	—	1.9	0.43	0.08	1.23	0.43

DISTRICT	Population at all ages			ZYMOTIC MORTALITY												Crude death-rate per 1,000 of Population			
	Census 1931 of areas as constituted after changes in Boundary	Estimated Middle of 1939		Number of Persons per acre	Per 1,000 of Population			Per 1,000 of Population			Per 1,000 of Population			Per 1,000 of Population			Crude death-rate per 1,000 of Population		
		For Birth Rates	For Death Rates		Live Birth-rate per 1,000 of Population	Still-births Rate per 1,000 of Population	Crude death-rate per 1,000 of Population	Adjusted death-rate by comparability factor	Mortality in children under one year per 1,000 registered live births	Per 1,000 live Births	Tuberculosis of Respiratory System	Diarrhoea (under 2 years)	Small-pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Typhoid and Paratyphoid Fevers	
Rowley Regis	41,235	44,780	44,790	11.7	17.3	0.83	10.1	12.0	44	—	0.02	—	0.04	0.11	2.6	0.45	0.11	1.29	0.49
Rugeley	7,137	7,633	7,722	2.7	17.9	0.39	10.0	10.2	29	—	—	—	—	7.2	0.52	0.13	1.17	0.13	
Sedgley	19,262	20,700	20,800	5.4	14.7	0.68	12.1	13.1	86	—	—	—	0.05	6.6	0.67	0.14	1.11	0.38	
Stafford	30,851	32,670	33,110	6.5	15.8	0.61	10.5	10.8	70	—	0.03	—	0.09	5.8	0.51	—	1.45	0.21	0.51
Stone	6,399	6,278	6,282	3.8	12.3	0.96	11.9	10.7	78	—	—	—	—	—	0.16	0.16	2.39	0.64	0.32
Tettenhall	5,967	6,727	6,735	2.7	16.2	0.59	10.1	9.2	18	—	—	—	—	—	0.08	0.08	2.76	0.50	0.50
Tipton	35,814	37,390	36,880	17.0	19.9	0.80	12.0	14.2	76	—	0.19	—	0.08	0.03	5.4	0.70	0.16	1.19	0.60
Uttoxeter	6,234	6,952	7,036	2.1	15.1	0.72	11.5	11.5	48	—	0.14	—	0.14	—	9.5	0.71	—	1.42	0.43
Wednesday	31,531	33,650	33,390	16.5	18.1	0.80	11.5	13.2	58	—	0.06	—	0.03	—	8.2	0.60	0.15	1.53	0.66
Wednesfield	9,106	14,540	14,630	5.8	23.8	0.69	9.4	11.0	55	—	—	0.07	0.14	—	2.9	0.55	0.07	0.96	0.14
Willenhall	26,421	28,320	28,440	10.0	22.2	0.81	10.2	12.1	49	—	—	—	—	0.11	3.2	0.70	0.11	1.27	
Totals and Averages	530,648	576,700	577,200	5.8	17.9	0.72	11.1	12.4	57	0.00	—	0.05	0.01	0.03	0.06	4.6	0.52	0.09	1.37
126 large towns in England	—	—	—	14.8	0.59	12.0	—	53	0.00	—	0.01	0.00	0.03	0.05	6.3	—	—	—	—
148 smaller towns, resident popn. 25,000-50,000	—	—	—	15.6	0.57	11.2	—	40	0.00	—	0.01	0.00	0.02	0.04	3.0	—	—	—	—

DISTRICT	Population at all ages			RURAL											
Census 1931 of areas as constituted after changes in Boundary	Estimated Middle of 1939		Mean Area per Person in acres	Per 1,000 of Population			Per 1,000 of Population								
<th colspan="3

**URBAN**

Family size	Family size	Family size			Family size			Family size			Family size			Family size		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
2	2	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
3	3	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
4	4	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
5	5	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
6	6	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
7	7	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
8	8	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
9	9	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
10	10	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
11	11	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
12	12	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
13	13	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
14	14	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
15	15	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46

**URBAN** (continued)

Family size	Family size	Family size			Family size			Family size			Family size			Family size		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
2	2	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
3	3	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
4	4	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
5	5	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
6	6	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
7	7	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
8	8	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
9	9	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
10	10	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
11	11	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
12	12	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
13	13	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
14	14	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
15	15	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46

**RURAL**

Family size	Family size	Family size			Family size			Family size			Family size			Family size		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
2	2	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
3	3	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
4	4	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
5	5	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
6	6	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
7	7	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
8	8	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
9	9	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
10	10	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
11	11	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
12	12	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
13	13	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
14	14	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46
15	15	46	466	10	2,046	1	—	46	46	46	46	46	46	46	46	46